

MARIJUANA
COCAINE
PRESCRIPTION DRUGS

**THE CONSUMPTION AND CONSEQUENCES
OF ALCOHOL, TOBACCO, AND DRUGS IN INDIANA:
A STATE EPIDEMIOLOGICAL PROFILE
2014**

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 2014

Developed by the Indiana State Epidemiology and
Outcomes Workgroup, 2014

Our Vision

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

Our Mission

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

Published by the Center for Health Policy at
Indiana University-Purdue University Indianapolis (IUPUI)

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.

This document and the efforts described herein were funded by the Indiana Family and Social Services Administration/Division of Mental Health and Addiction through the Substance Abuse Prevention and Treatment Block Grant CFDA 93.959 from the Substance Abuse and Mental Health Services Administration.

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



This document is available via the World Wide Web and can be accessed and downloaded from the Center for Health Policy Web site (www.healthpolicy.iupui.edu).

BOOK TEAM

Eric R. Wright, PhD
Dennis P. Watson, PhD
Marion S. Greene, MPH, PhD(c)
Harold E. Kooreman, MA
Matthew J. Williams, JD, MA
Joanna Jackson, RN, MSN
Victoria Buchanan, MS, MPH

Editor: Lyndy Kouns

Cover Design and Layout: Susan Hill

STATEMENT OF REPRODUCIBILITY

Permission is granted, free of charge, to photocopy pages of this document that are not copyrighted. Permission to reproduce from government sources is traditionally freely granted by the U.S. Government. If the analysis included in this report is quoted, the source should be credited.

978-0-9800562-8-0

Printed in the United States of America by the Center for Health Policy at IUPUI, Indianapolis, Indiana

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 P. 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

Taya Fernandes

Medicaid Fraud Control Unit
Office of the Indiana Attorney General

Julie Gries, MS

Prevention Bureau Chief,
Bureau of Mental Health Promotion and Addiction Prevention
Division of Mental Health and Addiction

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

Holly Walpole

Director,
INSPECT Program
Indiana Professional Licensing Agency

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

Sarah Roberts, MPH

Special Projects Director
Division of Mental Health and Addiction

Barbara Seitz de Martinez, PhD, MLS, CPP

Deputy Director,
Indiana Prevention Resource Center,
Indiana University

Jessica Skiba, MPH

Trauma and Injury Prevention
Indiana State Department of Health

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

* Indicates non-voting member

Harold Kooreman, MA

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

Matthew Williams, JD, MA

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

Jackson, Joanna, RN, MSN

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

Victoria Buchanan, MS, MPH

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

* Indicates non-voting member



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, PhD(c), Public Health Research Analyst,

Harold Kooreman, MA, Policy Analyst,

Matthew Williams, JD, MA, Research Assistant,

Joanna Jackson, RN, MSN, Research Assistant, and

Victoria Buchanan, MS, MPH, 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.

TABLE OF CONTENTS

Introduction.....	1
1. Data Highlights	3
2. Methods.....	17
3. Alcohol Use in Indiana: Consumption Patterns and Consequences	27
4. Tobacco Use in Indiana: Consumption Patterns and Consequences.....	55
5. Marijuana Use in Indiana: Consumption Patterns and Consequences	77
6. Cocaine Use in Indiana: Consumption Patterns and Consequences	97
7. Heroin Use in Indiana: Consumption Patterns and Consequences	113
8. Methamphetamine Use in Indiana: Consumption Patterns and Consequences.....	125
9. Prescription Drug Abuse in Indiana: Consumption Patterns and Consequences.....	145
10. Polysubstance Abuse	171
11. Mental Health.....	191
12. Indicators of Substance Abuse	201
APPENDIX I. Data Sources Recommended by the State Epidemiology and Outcomes Workgroup (SEOW)	219
APPENDIX II. Substance Use Indicators At-A-Glance.....	221

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

As with 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).

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

Co-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@gsu.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. Over half of the population 12 years and older reported current (past month) use (IN: 51.6%; U.S.: 52.1%) (Substance Abuse and Mental Health Services Administration, 2014).

An estimated 60.4% of Indiana college students currently drink alcohol (King & Jun, 2014).¹ Potentially dangerous uses of alcohol include binge, heavy, and underage drinking, combining alcohol with driving, and combining alcohol with other drug use.

Binge Drinking

Binge drinking is defined as consuming five or more drinks on the same occasion at least once in the past month.

The 30-day prevalence for binge drinking in the population 12 years and older was similar between Indiana (22.3%) and the United States (22.9%). The highest rate was found among 18- to 25-year-olds (IN: 40.9%; U.S.: 38.7%) (Substance Abuse and Mental Health Services Administration, 2014).

Among Indiana college students, the past-month binge drinking prevalence was an estimated 47.7% (King & Jun, 2014).

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 significantly lower in Indiana (5.2%) and the United States (6.2%). No significant difference was found on prevalence of heavy use between Hoosier men (6.1%) and women (4.4%). Heavy use decreased with age, and adults 65 years and older reported the lowest prevalence (2.9%). Estimates were not available in Indiana for race/ethnicity other than white (5.2%) and Hispanic (6.2%) (Centers for Disease Control and Prevention, 2013).

Youth Consumption—Underage Drinking

The rates for underage drinking in Indiana and the nation were statistically similar. In Indiana, 12.0% of 12- to

17-year-old youths reported that they had consumed alcohol in the past 30 days (U.S.: 12.2%).

In the age category of 12- to 20-year-olds, the numbers were even higher: 24.1% of young Hoosiers reported current use of alcohol (U.S.: 23.5%), and 15.3% stated that they engaged in binge drinking (U.S.: 14.7%) (Substance Abuse and Mental Health Services Administration, 2014).

An estimated one in three high school students (grades 9 through 12) reported current alcohol use (IN: 33.4%; U.S.: 38.7%), and one in five admitted to binge drinking in the past month (IN: 19.8%; U.S.: 21.9%). Indiana and the nation were similar on both measures (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 (7.0%) and the nation (6.7%). The most affected age group encompassed 18- to 25-year-olds (IN: 14.5%; U.S.: 13.7%). The percentages of individuals ages 12 and older needing but not receiving treatment for alcohol use in the past year were also comparable (IN: 6.9%; U.S.: 6.4%) (Substance Abuse and Mental Health Services Administration, 2014).

According to treatment data, alcohol was responsible for the largest percentage of admissions to substance abuse treatment facilities in 2012. Indiana's percentage of alcohol treatment admissions (40.1%) was statistically higher than the nation's (38.9%). 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, 2012).

Morbidity and Mortality

Between 2000 and 2012, a total of 4,759 Hoosiers died from alcohol-related disease causes. In 2012, Indiana's age-adjusted mortality rate for alcohol-attributable deaths was 7.0 per 100,000 population (U.S.: 7.9 per 100,000 population) (Centers for Disease Control and Prevention, 2015). Tables 1.1 and 1.2 list conditions that can be attributed to alcohol use.

¹Twelve 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 8,159 in 2013. Also, the number of fatalities in crashes attributable to alcohol declined from 242 to 180 during those same years. The 2013 overall annual rate for alcohol-related collisions in Indiana was 1.2 per 1,000 population (Indiana State Police, 2014).

Legal Consequences

Indiana's 2011 arrest rates, per 1,000 population, were significantly higher than the nation's for public intoxication (IN: 2.3; U.S.: 1.3) and liquor law violations (IN: 2.0; U.S.: 1.2), but were similar for driving under the influence (IN: 3.6; U.S.: 3.5) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012).

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, 2014). In Indiana, one-third of the population ages 12 years and older (32.3%) said they used a tobacco product in the past month (U.S.: 26.1%). The age group with the highest rate of use was 18- to 25-year-olds (IN: 45.0%; U.S.: 37.5%). Most tobacco consumption involved cigarettes. Indiana's past-month cigarette smoking prevalence among individuals ages 12 years and older was 25.7% (U.S.: 21.7%). Again, the highest rate was found among 18- to 25-year-olds (IN: 36.1%; U.S.: 31.2%) (Substance Abuse and Mental Health Services Administration, 2014).

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

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

Condition	Percentage Directly Attributable to Alcohol
Alcohol abuse/dependence	100%
Alcohol cardiomyopathy	100%
Alcohol polyneuropathy	100%
Alcohol-induced chronic pancreatitis	100%
Alcoholic gastritis	100%
Alcoholic liver disease	100%
Alcoholic myopathy	100%
Alcoholic psychosis	100%
Degeneration of nervous system due to alcohol	100%
Fetal alcohol syndrome/Fetus and newborn affected by maternal alcohol use	100%
Alcohol poisoning	100%
Excessive blood alcohol level	100%
Suicide by and exposure to alcohol	100%

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

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

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

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

In regard to smoking, 25.2% of Indiana college students reported past-year cigarette use and 13.0% reported current use (King & Jun, 2014).

Electronic cigarettes (e-cigarettes) and other electronic nicotine delivery devices have surged in popularity in recent years. In 2012, both current cigarette smokers (49.2%) and former smokers (9.8%) were significantly more likely to have used e-cigarettes in their lifetime than non-smokers (3.6%) (Tobacco Prevention and Cessation Commission, 2014).

Youth Consumption

The percentages of young people (12 to 17 years) currently using a tobacco product (IN: 10.3%; U.S.: 8.2%) and currently smoking cigarettes (IN: 7.7%; U.S.: 6.1%) were similar between Indiana and the nation (Substance Abuse and Mental Health Services Administration, 2014).

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

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

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

Note: CI = confidence interval

Source: Centers for Disease Control and Prevention, 2013

31.6% to 13.7% for high school students (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013).

Lifetime use of e-cigarettes was 3.9% for middle school students and 10.6% for high school students in Indiana. Among current Indiana youth cigarette smokers, 16% of middle school students and 19% of high school students reported currently using e-cigarettes (Tobacco Prevention and Cessation Commission, 2014).

Morbidity and Mortality

Tobacco causes serious health consequences, including lung cancer, respiratory illness, and heart disease. An estimated 11,100 Hoosiers die annually from smoking-attributable causes. 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 (11.0%) reported past-year use (U.S.: 12.3%), and 6.3% reported past-month use (U.S.: 7.4%). Highest rates of use were found among 18- to 25-year-old Hoosiers (past-year use: 31.6%; past-month use: 17.7%); national rates were similar (Substance Abuse and Mental Health Services Administration, 2014).

Marijuana use was also prevalent among Indiana college students, as 14.1% of college students reported current use and 28.5% reported past-year use (King & Jun, 2014).

Youth Consumption

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

One in five Indiana high school students used marijuana in the past month (IN: 20.0%; U.S.: 23.1%). Marijuana use was significantly lower in 9th graders than in 11th and 12th grade students. Current use was significantly higher for male (23.4%) than female (16.4%) high school students. Black students reported significantly higher current use (32.1%) than white students (17.7%) (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, Boyken, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014).

Marijuana Abuse and Dependence

In 2012, nearly one-half (47.2%) 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 (38.0%). In Indiana's treatment population, the highest percentages of marijuana use were found among males (50.6%), blacks (54.0%), and individuals under the age of 18 (75.6%). Over one-fifth of Hoosiers in treatment (20.1%) reported marijuana dependence,² a percentage significantly higher

Table 1.4 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use, by Grade (Indiana Youth Survey and Monitoring the Future Survey, 2002–2014)

Grade	Geography	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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%	6.8%
	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%	6.5%
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%	13.6%
	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%	16.6%
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%	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%	21.2%

Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

²We defined marijuana dependence as “individuals in substance abuse treatment listing marijuana as their primary substance at admission.”

than the nation's (18.0%). Again, males (22.5%), blacks (29.8%), and individuals under the age of 18 (59.7%) had statistically higher percentages (Substance Abuse and Mental Health Data Archive, 2012).

Legal Consequences

In 2012, the Indiana arrest rate for marijuana possession was 1.7 per 1,000 population (U.S.: 1.9) and for marijuana sale/manufacture was 0.3 per 1,000 population (U.S.: 0.2) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012).

COCAINE

Population-based estimates on past-year cocaine use were similar between Indiana and the nation (IN: 1.4%; U.S.: 1.7%). Young adults ages 18 to 25 displayed the highest rates (IN: 4.1%; U.S.: 4.5%) (Substance Abuse and Mental Health Services Administration, 2014).

Additionally, 2.3% of Indiana college students used cocaine in the past year and 0.7% reported current use (King & Jun, 2014).

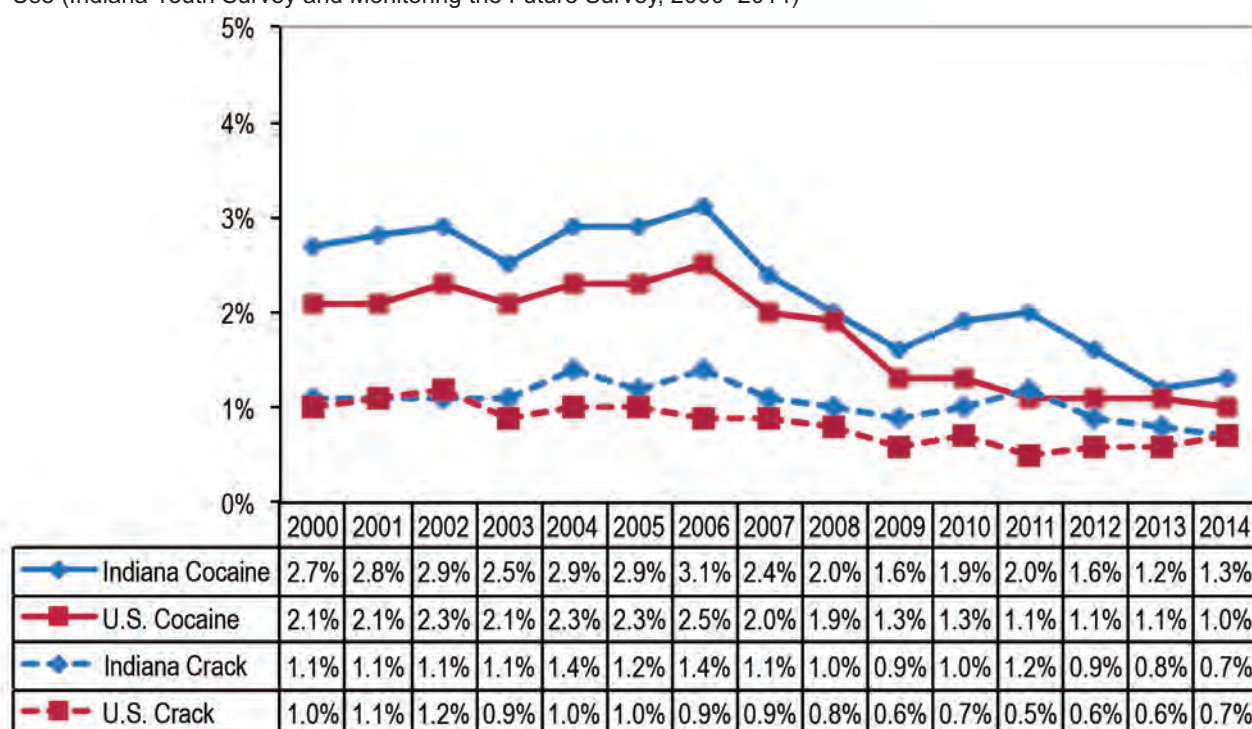
Youth Consumption

Past-year cocaine use prevalence among 12- to 17-year-olds was similar in Indiana (0.6%) and the United States (0.6%) (Substance Abuse and Mental Health Services Administration, 2014).

High school students' rates for lifetime use (IN: 5.6%; U.S.: 6.8%) and current use (IN: 2.3%; U.S.: 3.0%) in Indiana and the nation were statistically the same; no differences by gender, race, or grade were detected in Indiana (Centers for Disease Control and Prevention, 1991-2011).

From 2000 through 2014, 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). However, due to lack of detail in the publicly available data sets, statistical significance of the results could not be determined (Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014).

Figure 1.1 Percentage of Indiana and U.S. High School Seniors (Grade 12) Reporting Current Cocaine and Crack Use (Indiana Youth Survey and Monitoring the Future Survey, 2000–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

Cocaine Abuse and Dependence

In 2012, over 15.8% of Indiana's treatment episodes involved cocaine use; this figure was significantly lower than the U.S. percentage (20.8%). The percentages of treatment episodes with cocaine use were highest among females, blacks, and older adults.

In 6.6% of treatment episodes in Indiana, cocaine was reported as the primary drug of abuse; the U.S. percentage 6.9% was comparable. 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, 2012).

Legal Consequences

Indiana law enforcement made nearly 1,600 arrests for possession and over 1,500 arrests for sale/manufacture of opiates and cocaine in 2012, representing arrest rates of 0.2 per 1,000 population for both possession and sale/manufacture of opiates and cocaine. Indiana's arrest rates were lower for cocaine/opiate possession but comparable to the nation's for sale/manufacture (U.S.: 0.7 and 0.2 per 1,000 population, respectively) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012).³

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, 2014).

Among Indiana college students, 0.3% reported past-year heroin use and 0.1% reported use in the past month (King & Jun, 2014).

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,

Table 1.5 Percentage of Treatment Episodes with Cocaine Dependence Reported at Treatment Admission in Indiana (Treatment Episode Data Set, 2012)

		Cocaine Dependence
Gender	Male	5.9%
	Female	7.8%
Race	White	4.6%
	Black	17.2%
	Other	7.5%
Age Group	Under 18	2.5%
	18-24	2.6%
	25-34	4.8%
	35-44	10.4%
	45-54	12.1%
	55 and over	11.0%
Total		6.6%

Source: Substance Abuse and Mental Health Data Archive, 2012

or grade level in Indiana (Centers for Disease Control and Prevention, 1999-2011).

In 2014, reported heroin use among Indiana 12th grade students was as follows: 1.8% for lifetime use (U.S.: 1.0%) and 0.7% for monthly use (U.S.: 0.3%) (Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014).

Heroin Abuse and Dependence

In 2012, heroin use was reported in 11.1% of Indiana treatment episodes (U.S.: 19.8%), and heroin dependence⁴ was indicated in 7.9% (U.S.: 16.4%). While Indiana's percentages were significantly lower than the nation's, it should be noted that both heroin use and dependence have increased significantly in Indiana's treatment population since 2001. Significant differences were seen by gender (more women reported use), race (whites had higher percentages), and age group (young adults were mostly affected) (Substance Abuse and Mental Health Data Archive, 2012).

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

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

Morbidity and Mortality

A potential consequence of injected heroin use is contraction of HIV and/or hepatitis (B or C) from contaminated needles. In 2013, 364 new HIV infections and 90 new AIDS cases were reported in Indiana. A total of 11,087 individuals were living in Indiana with HIV disease,⁵ and 841 (or 7.9%) of these cases were attributable to injection drug use (IDU) (Indiana State Department of Health, 2013).

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 2013 was 1.1 per 100,000 population (95% CI: 0.9–1.4), which was significantly lower than the U.S. rate of 2.1 per 100,000 population (95% CI: 2.0–2.1) (Centers for Disease Control and Prevention, 2015).⁶

The hepatitis B virus (HBV) and hepatitis C virus (HCV) are usually transmitted via unprotected sex and among injection drug users. The incidence rates per 100,000 population for acute hepatitis in Indiana were 1.4 for HBV (U.S.: 0.9) and 1.7 for HCV (U.S.: 0.6) in 2012. Both HBV and HCV incidence rates have dropped in the past decades (Centers for Disease Control and Prevention, 2014). 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, 2015).

Legal Consequences

Indiana law enforcement made nearly 1,600 arrests for possession and over 1,500 arrests for sale/manufacture of opiates and cocaine in 2012, representing arrest rates of 0.2 per 1,000 population for both possession and sale/manufacture of opiates and cocaine. Indiana's arrest rates were lower for cocaine/opiate possession but comparable to the nation's for sale/manufacture (U.S.: 0.7 and 0.2 per 1,000 population, respectively) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012).⁷

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, 2014).

In 2014, an estimated 0.5% of Indiana college students had used meth in the past year and 0.2% had used it in the past month (King & Jun, 2014).

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., 2014).

Methamphetamine Abuse and Dependence

Between 2000 and 2012, the percentage of treatment admissions in Indiana reporting meth dependence⁸ increased significantly from 1.5% to 6.5%. 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, 2012).

Legal Consequences

The Indiana State Police seized 1,416 clandestine methamphetamine labs in 2014; which represents a decrease in both lab seizures and arrests from 2013 (Indiana State Police, 2015).

In Indiana, over 2,100 arrests were made for possession and nearly 900 for the sale/manufacture of

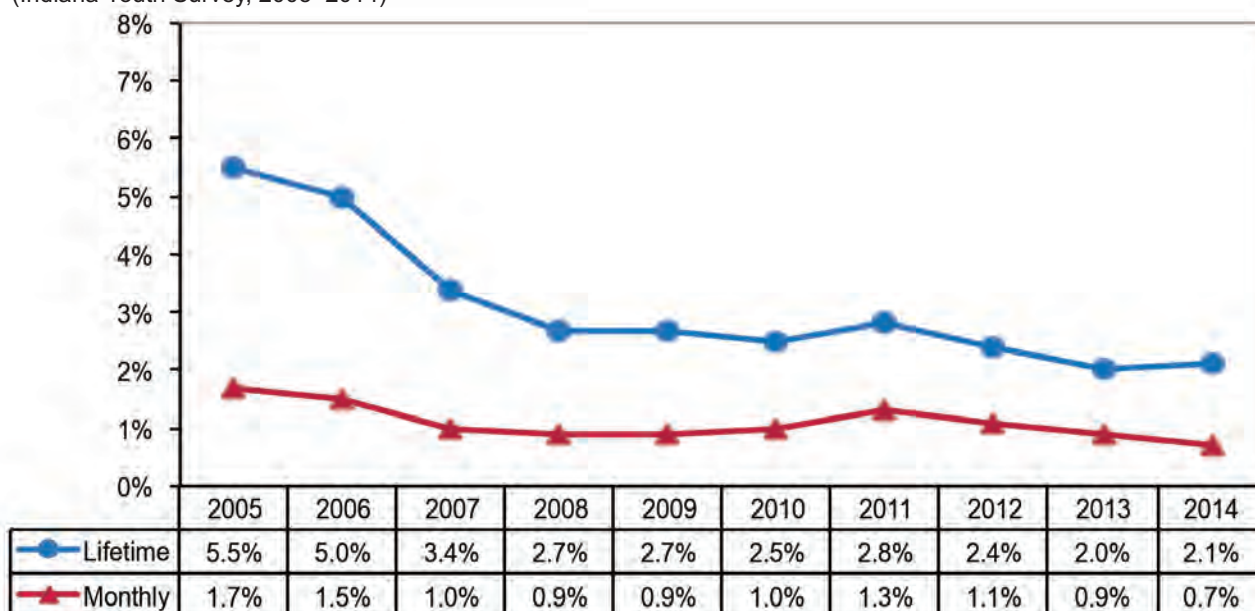
⁵HIV disease includes both HIV infections and AIDS cases.

⁶Mortality rates for HIV/AIDS are based on ICD-10 codes B20–B24 (Human immunodeficiency virus [HIV] disease).

⁷The Uniform Crime Reporting Program data set combines arrests for cocaine and opiates; arrest information is not available for cocaine or opiates alone.

⁸We 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 (Indiana Youth Survey, 2005–2014)



Source: Gassman, et al., 2014

synthetic drugs⁹ in 2012; this represents annual arrest rates of 0.3 (U.S.: 0.2) and 0.1 (U.S.: 0.1), per 1,000 population, respectively (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012).

PRESCRIPTION DRUG ABUSE

In 2014, more than 13 million controlled prescription drugs were dispensed in Indiana. The most widely dispensed prescription drugs were opioids¹⁰ (50.5%), followed by depressants of the central nervous system¹¹ (29.7%) and stimulants¹² (14.8%) (Indiana Board of Pharmacy, 2015).

An estimated 5.3% of the Indiana population ages 12 and older reported nonmedical use of pain relievers in the past year; representing 286,000 Hoosiers. Indiana's prevalence rate was similar to the nation's, at 4.5%. Young adults ages 18-25 had the highest rate (12.2%) of prescription pain medication abuse which was significantly higher than the nation's rate (9.5%) (Substance Abuse and Mental Health Services Administration, 2014).

The Indiana College Substance Use Survey includes questions on (a) use of prescription medications not prescribed to the student and (b) use of prescription medication prescribed to the student but misused. According to findings from the 2014 survey: (a) 11.2% of Indiana college students used prescription medications not prescribed to them in the past year and 3.8% are currently using; and (b) 3.0% of Indiana college students misused their prescription medication in the past year, with 1.0% of students reporting current misuse (King & Jun, 2014).

Youth Consumption

Among Hoosiers ages 12 to 17, 5.7% used prescription pain medications for nonmedical purposes in the past year; Indiana's percentage was statistically similar to the nation's, 5.0% (Substance Abuse and Mental Health Services Administration, 2014).

For Indiana prevalence rates of current nonmedical use of prescription drugs¹³ among 8th, 10th, and 12th grade students, see Figure 1.4.

⁹The Uniform Crime Reporting Program collects arrest information on synthetic drugs. The category includes methamphetamine, methadone, and Demerol.

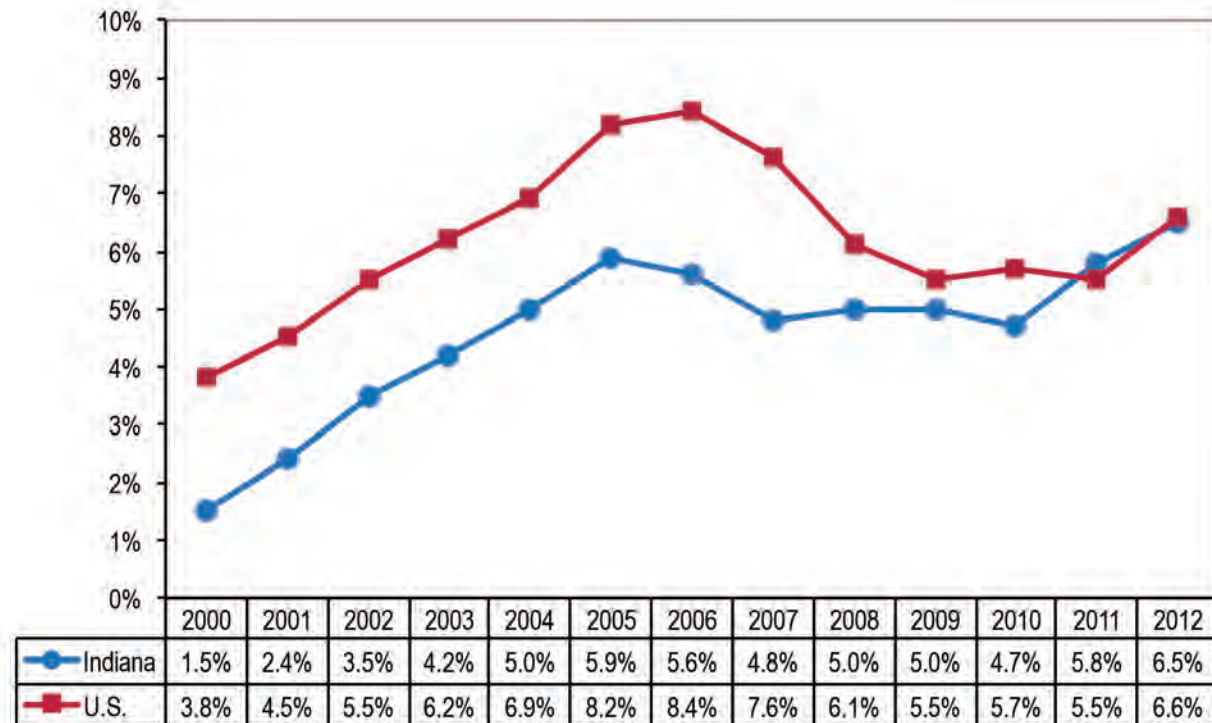
¹⁰Opioids include pain relievers, such as oxycodone and hydrocodone.

¹¹CNS depressants include sedatives, tranquilizers, and hypnotics.

¹²Stimulants include Ritalin®, Adderall®, and dextroamphetamine.

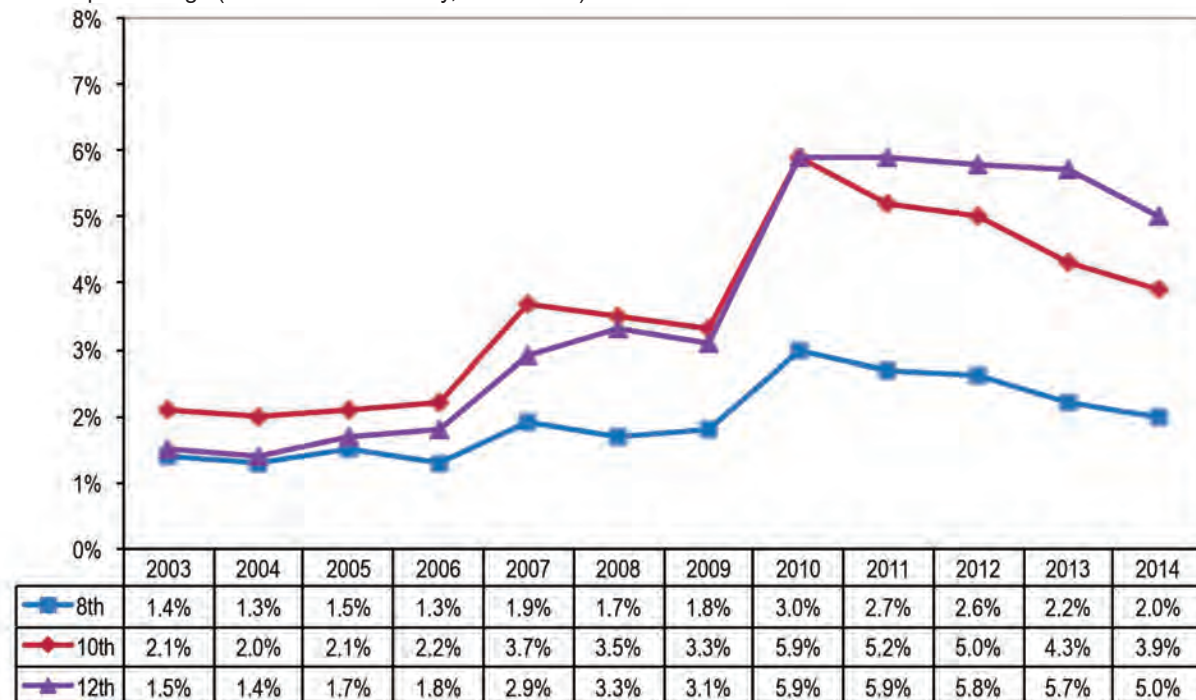
¹³Includes Ritalin, Oxycontin, and Xanax

Figure 1.3 Percentage of Treatment Episodes with Methamphetamine Dependence Reported at Treatment Admission in Indiana and U.S. (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 1.4 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Nonmedical Use of Prescription Drugs (Indiana Youth Survey, 2003–2014)



Source: Gassman, et al., 2014

Prescription Drug Abuse and Dependence

In 2012, nonmedical prescription drug use was reported in 29.1% of Indiana treatment episodes (U.S.: 21.1%). Most of these treatment episodes were due to pain relievers (IN: 22.0%; U.S.: 15.9%), followed by sedatives and tranquilizers (IN: 9.4%; U.S.: 6.6%) and stimulants (IN: 2.6%; 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 15.5% of Indiana treatment episodes in 2012, prescription drug dependence¹⁴ was indicated (U.S.: 11.4%). Most of these were due to pain relievers

(IN: 12.5%; U.S.: 9.7%), followed by sedatives and tranquilizers (IN: 2.2%; U.S.: 1.2%) and stimulants (IN: 0.9%; 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 1.6). Rates for prescription drug dependence have increased significantly in Indiana from 2000 through 2012 (Substance Abuse and Mental Health Data Archive, 2012).

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

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	11.2%	8.9%	1.5%	0.8%
	Female	22.8%	18.5%	3.3%	1.0%
Race	White	18.2%	14.6%	2.5%	1.0%
	Black	2.7%	2.0%	0.5%	0.1%
	Other	9.1%	7.5%	1.4%	0.2%
Age Group	Under 18	3.4%	2.3%	0.6%	0.5%
	18 to 24	15.3%	11.7%	2.6%	1.0%
	25 to 34	21.5%	18.1%	2.4%	1.0%
	35 to 44	13.8%	10.8%	2.1%	0.9%
	45 to 54	9.2%	6.9%	1.8%	0.5%
	55 and over	3.4%	2.3%	0.6%	0.5%
Total		15.5%	12.5%	2.2%	0.9%

Source: Substance Abuse and Mental Health Data Archive, 2012

Legal Consequences

In 2012, law enforcement made over 2,500 arrests for possession and over 1,000 arrests for sale/manufacture of "other drugs" in Indiana. This represents arrest rates of 0.4 and 0.2 per 1,000 population, respectively. U.S. rates were significantly higher for possession (0.8) but the same for sale/manufacture (0.2) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012).

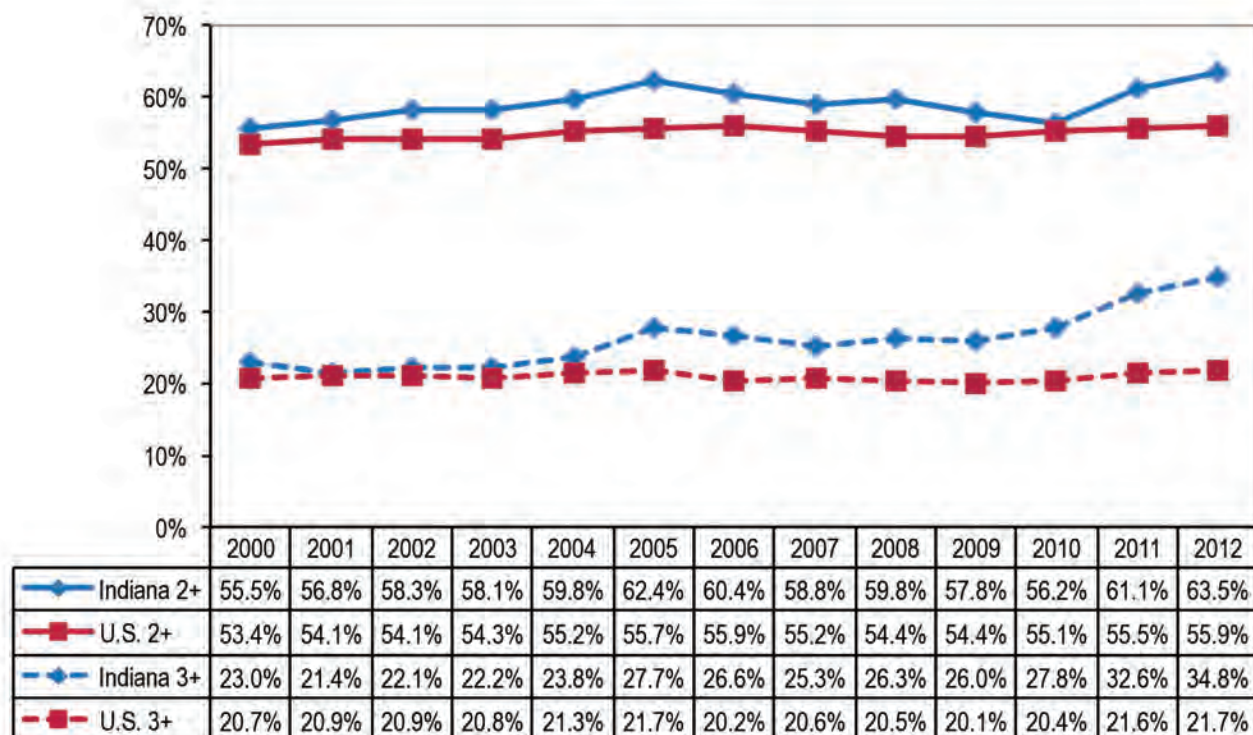
POLYSUBSTANCE ABUSE

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 2012

revealed that over half of the individuals seeking substance abuse treatment reported using at least two drugs at the time of admission, and Indiana's rates were significantly higher than the nation's. The percentage of treatment episodes involving two or more substances increased significantly in Indiana, from 55.5% in 2000 to 63.5% in 2012 (see Figure 1.5). Furthermore, in nearly one-third of Indiana treatment episodes, use of three or more substances was reported; again, Indiana's percentage increased significantly from 23.0% in 2000 to 34.8% in 2012 (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, 2012).

¹⁴We defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

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, 2000–2012)



Notes: The percentage of treatment episodes with three or more substances is a subgroup of (i.e., included in) the percentage of treatment episodes with two or more substances.

Source: Substance Abuse and Mental Health Data Archive, 2012

Cluster Analysis

We conducted a cluster analysis of 2012 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, cocaine, and marijuana alcohol and a drug in the “other drug” category, and (c) opiate-synthetic drugs and a drug in the “other drug” category (Substance Abuse and Mental Health Data Archive, 2012).

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 (19.6%)

and the United States 18.5% (Substance Abuse and Mental Health Services Administration, 2014). However, Hoosiers were more likely to report lifetime incidence of depression (IN: 19.5%; U.S.: 18.7%) (Centers for Disease Control and Prevention, 2013).

Within Indiana, history of depression was greatest among individuals who identified as multiracial, females, and those ages 45 to 64 (Centers for Disease Control and Prevention, 2013). 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, 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 (58.5%) than Substance Use Disorder (SUD) (29.6%), which, in turn, was significantly higher than the percentage of those with Co-Occurring Disorder (COD) (13.2%). Males had a higher percentage (48.9%) of both SMI and SUD (34.4%), 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 1.7) (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 2013 (Centers for Disease Control and Prevention, 2015).

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 rate¹⁵ at which an indicator occurred) and their overall contribution to the problem (measured by the frequency with which an indicator occurred).

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

Table 1.7 Demographic Characteristics of Clients by Serious Mental Illness (SMI), Substance Use Disorder (SUD), and Co-occurring Disorder (COD) Diagnosis (DARMHA, 2014)

		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 1.8 Counties with Total Priority Scores in the Top 10 Percent

Top 10 Percent	Overall Priority Score
Vanderburgh	208
Monroe	203
Lake	188
Howard	181
Marion	169
Madison	166
Clark	162
Tippecanoe	160
LaPorte	152

Note: Overall substance abuse priority scores ranged from 14 to 208, with higher scores indicating a more severe problem.

Source: Indiana Family and Social Services Administration, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012; Indiana State Police, 2014, 2015; Indiana Board of Pharmacy, 2015

¹⁵The rate was calculated by taking the frequency of an event (e.g., number of arrests), dividing it by the specified population (e.g., county population), and multiplying the result by 1,000. This represents the rate per 1,000 population.

REFERENCES, CHAPTER 1

- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Centers for Disease Control and Prevention. (2006-2010). *Alcohol-related disease impact (ARDI)*. Retrieved from http://apps.nccd.cdc.gov/DACH_ARDI/Default/Default.aspx
- Centers for Disease Control and Prevention. (2013). *Behavioral Risk Factor Surveillance System Survey Data*. Retrieved from <http://apps.nccd.cdc.gov/brfss/>
- Centers for Disease Control and Prevention. (2015). *CDC WONDER underlying cause of death (compressed mortality)*. Retrieved from <http://wonder.cdc.gov/>
- Centers for Disease Control and Prevention. (2014a). *Smoking and tobacco use: Fact sheets*. Retrieved from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm
- Centers for Disease Control and Prevention. (2014b). *Surveillance for Viral Hepatitis – United States, 2012*. Retrieved from <http://www.cdc.gov/hepatitis/Statistics/2012Surveillance/index.htm>
- Centers for Disease Control and Prevention. (n.d.). *State Tobacco Activities Tracking and Evaluation (STATE) System*. Retrieved from <http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx>
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., Oi, S. E. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana Board of Pharmacy. (2015). *De-identified INSPECT dataset for 2014*. Received January 19, 2015, from the Indiana Board of Pharmacy, Indiana Professional Licensing Agency.
- Indiana Division of Mental Health and Addiction. (2014). *Data Assessment Registry Mental Health and Addiction (DARMHA), 2014*. De-identified data received by the Center for Health Policy at IUPUI on January 23, 2015 Indianapolis, IN.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Indianapolis, IN: Indiana Family and Social Services Administration.
- Indiana State Department of Health. (2013). *Spotlight on HIV/STD/viral hepatitis – December 2013*. Retrieved from <https://secure.in.gov/isdh/26274.htm>
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2013). *Indiana Youth Tobacco Survey, 2000-2012*. Data set made available to the Center for Health Policy at IUPUI (December 12, 2013).
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2014). *Electronic cigarettes*. Retrieved from http://www.in.gov/isdh/tpc/files/Electronic_Cigarettes__11_10_14.pdf
- Indiana State Police. (2013). *Automated Reporting Information Exchange System (ARIES). Vehicle Crash Records System*. Database maintained by the Indiana State Police and made available to the Center for Criminal Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University–Purdue University Indianapolis (November 21, 2014).
- Indiana State Police. (2015). *Final 2014 ISP lab stats*. Received January 22, 2015, from Niki Crawford, First Sergeant Commander, Methamphetamine Suppression Section, in an e-mail to the Center for Health Policy, Indiana University Richard M. Fairbanks School of Public Health at IUPUI.
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- King, R.A., & Jun, M.K. (2014). *Results of the Indiana College Substance Use Survey–2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2012). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>

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

Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved December 22, 2014, from <http://www.samhsa.gov/data/population-data-nsduh/reports>

The Kaiser Family Foundation. (2013). *Indiana: HIV/AIDS*. Data Source: Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention-Surveillance and Epidemiology. Retrieved November 22, 2013, from <http://kff.org/state-category/hiv aids/>

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

DATA SOURCES

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

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

Alcohol-Related Disease Impact (ARDI) Database

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

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

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

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 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 2014 State Epidemiological Profile continues to provide information on present and past BRFSS prevalence rates for alcohol and tobacco use, it would not be appropriate to directly compare estimates prior to 2011 with later estimates, due to different data adjustment methods and different sampling frames.

Data Assessment Registry for Mental Health and Addiction (DARMHA)

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 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, age, and racial groups. Indiana mortality data can also be requested directly from the Indiana State Department of Health.

Indiana Scheduled Prescription Electronic Collection & Tracking (INSPECT)

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

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

Indiana Youth Survey (formerly known as Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) Survey)

The Indiana Youth Survey is an annual school-based assessment conducted by the Indiana Prevention Resource Center (IPRC) and funded through the Indiana Family and Social Services Administration/ Division of Mental Health and Addiction. The survey is designed to monitor patterns of alcohol, tobacco, and other drug use; gambling behaviors; as well as risk and protective factors among Indiana middle and high school students, grades 6 through 12. Young people who complete the questionnaire are asked to report on their 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. The Indiana Youth Survey is open to all Indiana school corporations and collects a large number of usable responses. However, the rate of participation varies widely across regions. Also, results are based on nonrandom sampling and therefore are not representative of Indiana's entire student population. Findings can be compared to findings from the Monitoring the Future survey (see page 20) conducted by the National Institute on Drug Abuse.

Indiana Youth Tobacco Survey (IYTS) 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. The survey also includes several modules of questions that focus on mental health issues.

Prevalence rates for substance use and specific mental health indicators are provided for the nation and each state. 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, for the entire United States or individual states.

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. Indiana has a rather low reporting rate, so UCR results should be interpreted with caution; however, completeness of reporting has been improving over the past years (see Table 2.1, page 26, for coverage indicator by county).

Youth Risk Behavior Surveillance System (YRBSS)

The YRBSS is a national survey of health-related behaviors among students in grades 9 through 12. The CDC conducts the survey biannually with the cooperation of state health departments throughout the nation. Student respondents are asked to describe whether they have engaged in numerous behaviors that could pose a danger to their health, including the use of alcohol, tobacco, and other drugs. CDC's online database allows comparisons between Indiana and the United States on gender, race/ethnicity, and grade level. Data for the YRBSS are available every other year (odd years), with a one-year lag between the end of data collection and the publication of results. Though YRBSS data for some states are available from 1991, Indiana

started participating in data collection in 2003. Availability of state-level results are dependent upon sufficient participation to achieve an adequate response rate to weight the data.

CONSIDERATIONS

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

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

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

SEOW DATA SOURCES LIST

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

Alcohol-Related Disease Impact (ARDI) Database

Description: ARDI provides state and national estimates on alcohol-related deaths and years of potential life lost (YPLL) based on alcohol-attributable fractions.

Sponsoring Organization/Source: Centers for Disease Control and Prevention (CDC)

Geographic Level: National and state levels

Availability: The database can be accessed at <http://apps.nccd.cdc.gov/ardi/HomePage.aspx>.

Trend: 2006-2010 (all estimates are based on data averages from 2006 through 2010)

Strengths/Weaknesses: ARDI may underestimate the actual number of alcohol-related deaths and years of potential life lost.

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

Description: ARIES contains data on vehicle crashes with and without alcohol involvement; data on fatal crashes are submitted to FARS.

Sponsoring Organization/Source: Indiana State Police (ISP); U.S. Department of Transportation/ National Highway Traffic Safety Administration (NHTSA)

Geographic Level: National, state, and county levels

Availability: Data are available from the NHTSA at <http://www.fars.nhtsa.dot.gov/Main/index.aspx> and upon request from the Indiana State Police.

Trend: 1994–2013

Strengths/Weaknesses: The data are in aggregate format; comparisons by demographic variables such as age, gender, and race/ethnicity are not possible.

Data Assessment Registry for Mental Health and Addiction (DARMHA)

Description: DARMHA is an administrative database that collects information on the entire Hoosier Assurance Plan (HAP) consumer population served by DMHA-contracted substance abuse and mental health providers.

Sponsoring Organization/Source: Indiana Division of Mental Health and Addiction (DMHA)

Geographic Level: State and county levels

Trend: 2014

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: 1995–2013

Strengths/Weaknesses: CDC consistently works to test and improve BRFSS methodology in an effort to make findings result in more valid and reliable data for public health surveillance. Due to substantial changes in methodology starting with the 2011 survey, comparison of current estimates with estimates from previous years would not be appropriate.

Hospital Discharge Data

Description: Hospital discharge data are publicly available in aggregate format. Dataset can be queried by primary diagnosis (ICD-9 codes), e.g., alcohol- and drug-induced diseases.

Sponsoring Organization/Source: Indiana State Department of Health (ISDH)

Geographic Level: Indiana

Availability: Annual data are available at <http://www.in.gov/isdh/20624.htm>.

Trend: 1999–2013

Strengths/Weaknesses: The data are in aggregate format; comparisons by demographic variables such as age, gender, and race/ethnicity are not possible.

Indiana College Substance Use Survey

Description: The survey measures the prevalence of alcohol, tobacco and other drug use; consequences of use; alcohol availability; and student perceptions of peer behaviors among Indiana college students.

Sponsoring Organization/Source: Indiana Collegiate Action Network (ICAN); Indiana Prevention Resource Center (IPRC)

Geographic Level: Indiana

Availability: Annual data are available at <http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey>.

Trend: 2009–2014

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/isdh/tpc/index.htm>.

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: 1995–2014

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: 1999–2012 (online from CDC); Indiana data for other years are available on request from ISDH

Strengths/Weaknesses: The strengths of the NVSS include availability of multiple years of data and the relatively large number of American Indian, Alaska Native, and other Native American respondents. However, a primary weaknesses of the data are the quality of the race/ethnicity information, particularly for the American Indian/Alaska Native category, as data quality checks of the racial/ethnic distribution of the deceased in this category are lower than the distribution represented in Census estimates.

Indiana Scheduled Prescription Electronic Collection & Tracking (INSPECT)

Description: INSPECT is Indiana's prescription drug monitoring program; the online database collects information each time a controlled substance is dispensed.

Sponsoring Organization/Source: Indiana Professional Licensing Agency (IPLA)

Geographic Level: Indiana and counties (zip codes)

Availability: Eligible users (such as health care providers) may register for a secured account at www.in.gov/INSPECT.

Trend: 2008-2014

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

Indiana Youth Survey

Description: The Indiana Prevention Resource Center (IPRC) manages the Indiana Youth Survey, formerly known as the Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey. The survey is administered to students (6th through 12th graders) annually in a number of schools throughout the state.

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

Geographic Level: State and regions

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

Trend: 1993–2014

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.

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

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

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

Geographic Level: National and state

Availability: Data are available on request from ITPC, and annual reports can be accessed at <http://www.in.gov/isdh/tpc/index.htm>. 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: 1991–2014

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)

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://media.samhsa.gov/data/NSDUH.aspx>.

Trend: State estimates are available for 1999–2013

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://www.icpsr.umich.edu/icpsrweb/ICPSR/series/00056>.

Trend: 1999–2012 national and state TEDS data; county-level data reported for 2014

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: 1994–2012

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

Youth Risk Behavior Surveillance System (YRBSS)

Description: This biannual national survey monitors health risks and behaviors among youth in grades 9 through 12.

Sponsoring Organization/Source: Centers for Disease Control and Prevention (CDC); Indiana State Department of Health (ISDH)

Geographic Level: National, state

Availability: National and state-level data are downloadable from selected published tables on the CDC website at <http://nccd.cdc.gov/YouthOnline/App/Default.aspx>.

Trend: For the nation, the survey tracks every other year from 1991 through 2013; Indiana data are available for 2003 through 2011

Strengths/Weaknesses: At the state level, data by ethnicity (Hispanic) might not be available for some variables.

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

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

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, 2012

3

ALCOHOL USE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

ALCOHOL CONSUMPTION

General Consumption Patterns

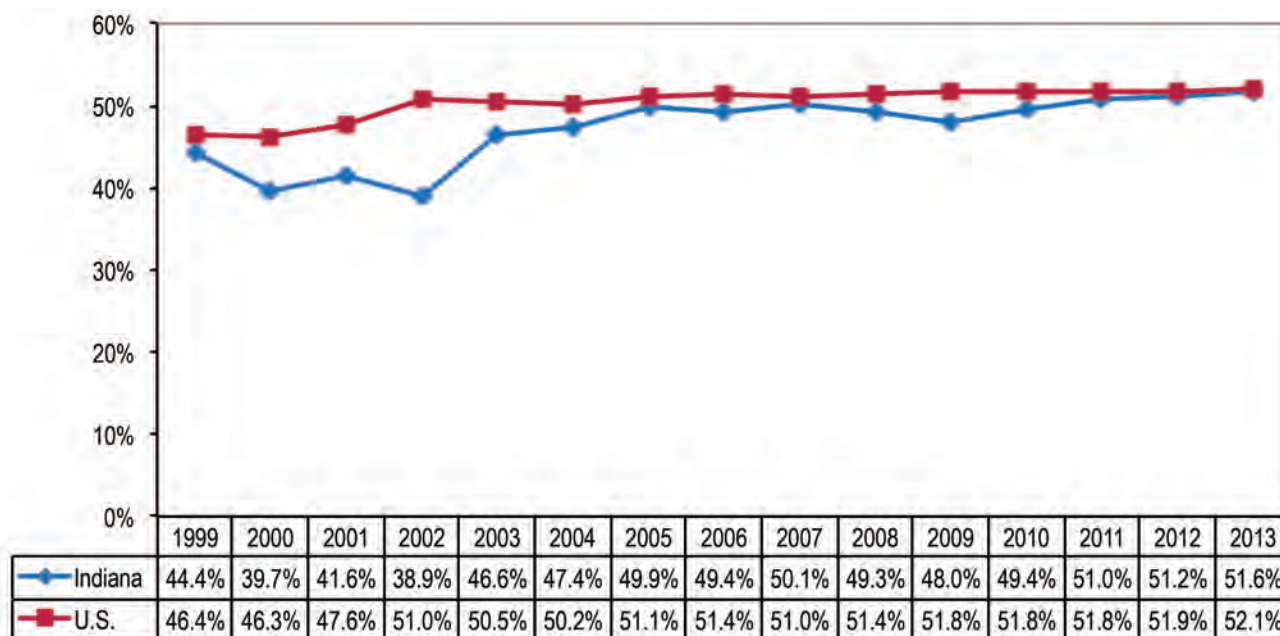
Alcohol is the most frequently used substance in both Indiana and the United States. In 2011, 10.7 million gallons of ethanol (the intoxicating agent in alcoholic beverages) were consumed in Indiana; this included, by volume, 110.4 million gallons of beer, 11.2 million gallons of wine, and 9.8 million 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, 2014).

In 2014, a total of 13,074 permits for the sale of alcoholic beverages were on file in Indiana, representing a rate of 2.0 licenses per 1,000 Hoosiers. Most licenses

were in Marion (1,871) and Lake (1,106) Counties (Alcohol and Tobacco Commission, 2014).

Based on 2012–2013 averages calculated from the National Survey on Drug Use and Health (NSDUH), the Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that 51.6% (95% Confidence Interval [CI]: 48.4–54.9) of Indiana residents 12 years of age or older had used alcohol during the past month; Indiana's prevalence rate for current alcohol use¹ was similar to the U.S. rate of 52.1% (95% CI: 51.6–52.7) (see Figure 3.1) (Substance Abuse and Mental Health Services Administration, 2014).

Figure 3.1 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Current Alcohol Use (National Survey on Drug Use and Health, 1999–2013)



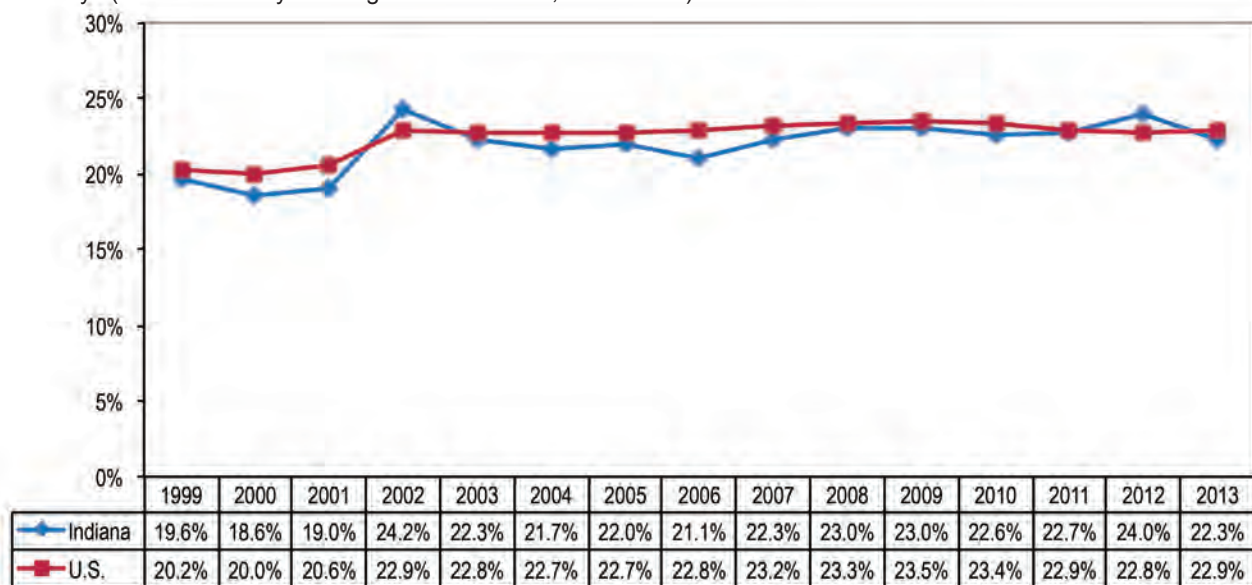
Source: Substance Abuse and Mental Health Services Administration, 2014

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

One risky alcohol consumption pattern assessed by the NSDUH is binge drinking. The NSDUH defines binge drinking as consumption of five or more alcoholic beverages on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least one day in the past month. In 2013, 22.3% of the

Indiana population 12 years of age or older reported binge drinking (95% CI: 20.0–24.8), similar to that of the national average of 22.9% (95% CI: 22.5–23.4) (see Figure 3.2) (Substance Abuse and Mental Health Services Administration, 2014).

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, 1999–2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

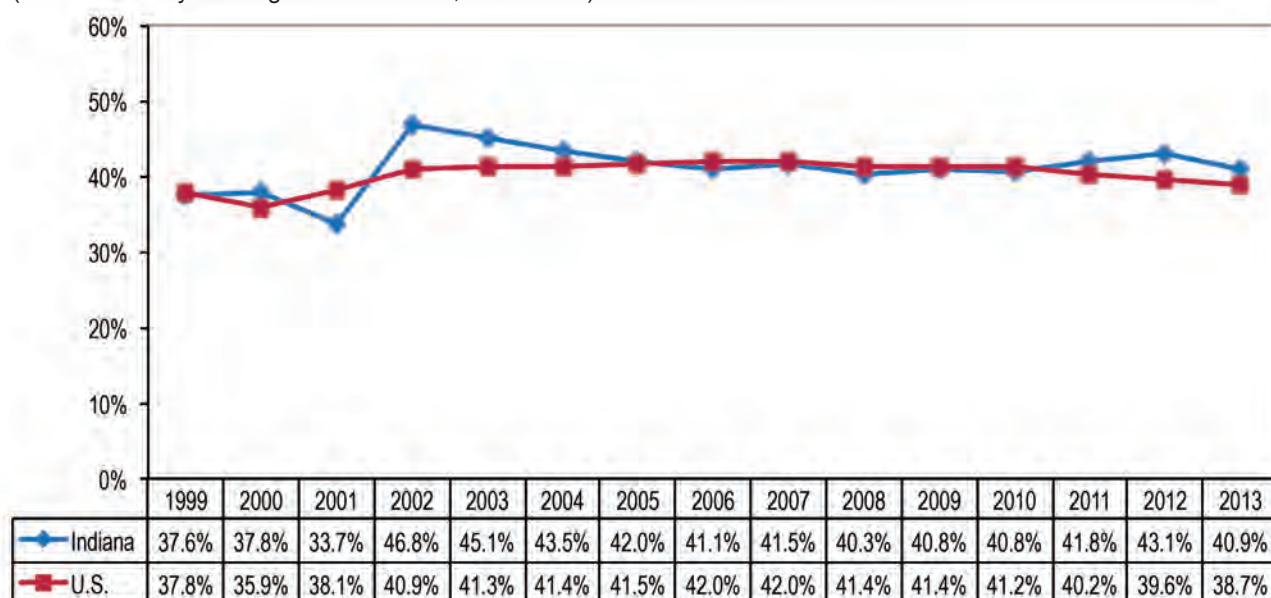
Adult Alcohol Consumption Patterns

According to 2012–2013 NSDUH results, 62.7% of Hoosiers (95% CI: 59.0–66.3) between the ages of 18 and 25 reported current alcohol use; the U.S. rate was similar at 59.9% (95% CI: 59.2–60.6). Past-month alcohol consumption was also similar among Indiana and U.S. adults 26 years and older with rates of 54.8% (95% CI: 50.8–58.8) and 55.7%, respectively (95% CI: 55.0–56.4) (Substance Abuse and Mental Health Services Administration, 2014).

Binge drinking was particularly widespread among young adults. The highest prevalence rate was found

among 18- to 25-year-olds, with the Indiana rate (40.9%; 95% CI: 37.3–44.5) and U.S. rate (38.7%; 95% CI: 37.9–39.5) being statistically similar (see Figure 3.3). Among adults, binge drinking rates decreased with age; 21.0% (95% CI: 18.2–24.1) of Hoosiers ages 26 years and older reported having consumed five or more drinks on the same occasion during the last 30 days (U.S.: 22.2%, 95% CI: 21.7–22.7) (Substance Abuse and Mental Health Services Administration, 2014).

Figure 3.3 Percentage of Indiana and U.S. 18- to 25-Year-Olds Reporting Binge Drinking in the Past 30 Days (National Survey on Drug Use and Health, 1999–2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

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

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

Source: Centers for Disease Control and Prevention, 2013

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

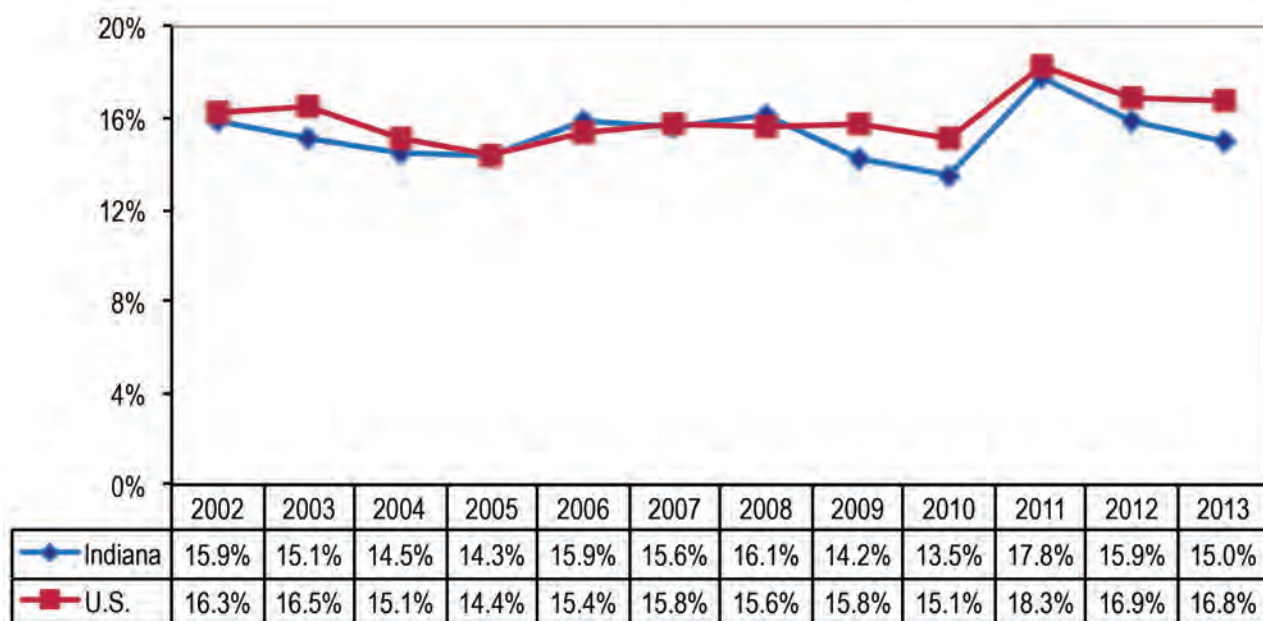
The BRFSS examines binge drinking as well, but its definition varies slightly from NSDUH's description and takes gender into account. The BRFSS defines binge drinking as "males having five or more drinks on one occasion and females having four or more drinks on one occasion." The overall prevalence rate for adult binge drinking based on this definition was statistically lower in Indiana (15.0%; 95% CI: 14.0-16.0) than the United States (16.8%). Binge alcohol use was significantly higher in males than females and more prevalent in younger individuals; no statistical differences were observed by race/ethnicity (see Table 3.2). Binge drinking has remained stable from 2002 through 2010 (see Figure 3.4) (Centers for Disease Control and Prevention, 2013). However, due to changes the Centers for Disease Control and Prevention made to the BRFSS, survey data, starting with 2011, should not be

compared to results from previous years, though the data are provided as a reference point. (For more detailed information, see Chapter 2 “Methods”.)

Additionally, the BRFSS collects information on a measure called heavy drinking. The BRFSS defines heavy drinking as “adult men having more than two drinks per day and adult women having more than one

drink per day.” Overall rates for heavy drinking were statistically lower in Indiana (5.2%; 95% CI: 4.6–5.8) than in the United States (6.2%) in 2013. In Indiana, 6.1% of men (95% CI: 5.1–7.1) and 4.4% of women (95% CI: 3.7–5.1) reported heavy drinking (Centers for Disease Control and Prevention, 2013).

Figure 3.4 Percentage of Indiana and U.S. Adults Reporting Binge Drinking in the Past 30 Days (Behavioral Risk Factor Surveillance System, 2002–2013)



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, 2013

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

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

Source: Centers for Disease Control and Prevention, 2013

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).

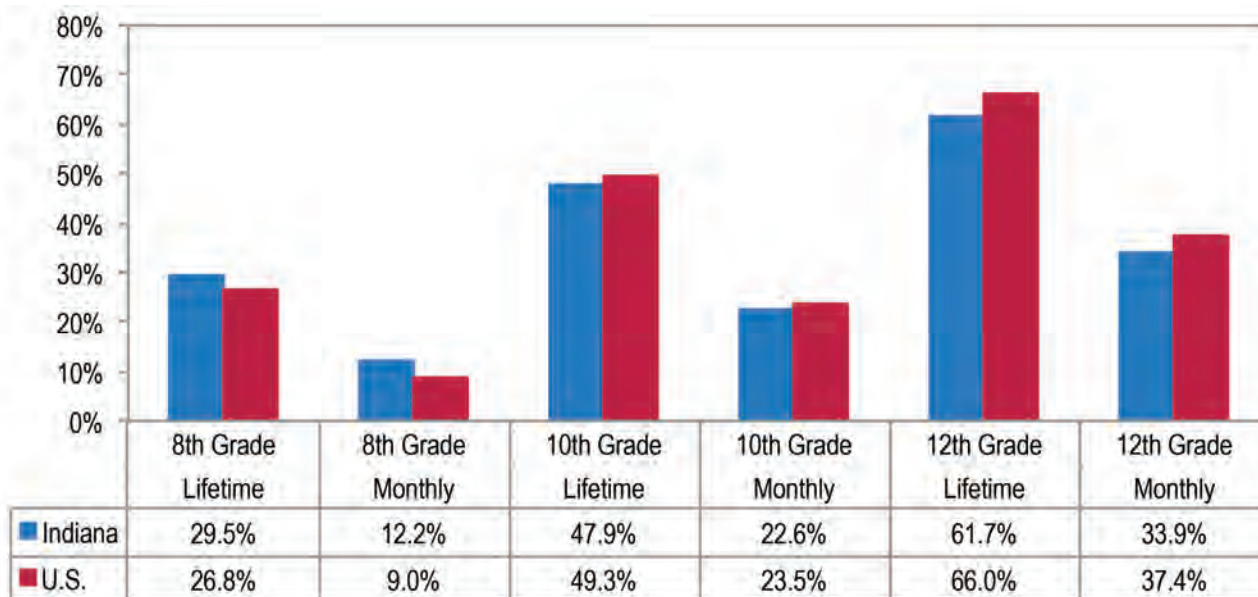
According to 2012–2013 NSDUH estimates, 12.0% (95% CI: 10.2–14.2) of young people ages 12 to 17 consumed alcohol in the past 30 days in Indiana; the rate was similar on the national level (12.2%; 95% CI: 11.8–12.6). Additionally, 7.0% (95% CI: 5.7–8.6) of Indiana youths in this age group engaged in binge drinking in the past month; the state's prevalence among 12- to 17-year-olds was similar to the nation's (6.7%; 95% CI: 6.4–7.0) (Substance Abuse and Mental Health Services Administration, 2014).

NSDUH also provides underage drinking prevalence estimates among 12- to 20-year-olds. Indiana's rates for current use (24.1%; 95% CI: 21.7–26.6) and binge drinking (15.3%; 95% CI: 13.5–17.3) were similar to U.S. rates of 23.5% (95% CI: 22.9–24.2) and 14.7% (95% CI: 14.2–15.3), respectively (Substance Abuse and Mental Health Services Administration, 2014).

In 2014, almost 62% of Indiana 12th grade students reported using alcohol at least once during their lifetime (Gassman, Jun, Samuel, Agley, Lee, Boyken, et al., 2014). 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 13.5 years (Gassman, et al., 2014).

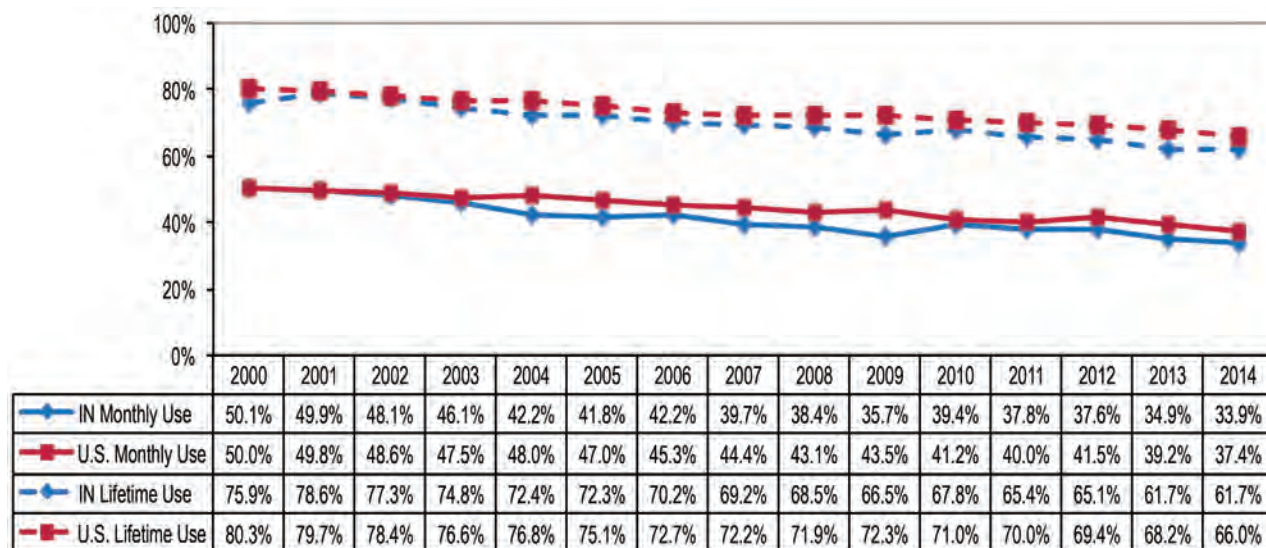
For more detailed data on lifetime and monthly alcohol use among Indiana and U.S. 8th, 10th, and 12th grade students, see Figure 3.5; for trend information (from 2000 through 2014) on lifetime and monthly alcohol use among high school seniors, see Figure 3.6. For lifetime, monthly, and binge use by Indiana region and grade for 2014, see Appendix 3A, page 42.

Figure 3.5 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Lifetime and Monthly Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

Figure 3.6 Percentage of Indiana and U.S. High School Seniors (12th Grade) Reporting Monthly and Lifetime Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2000–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

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, 2014). According to 2014 results, 79.6% of students who responded to the survey reported past-year alcohol use and 60.4% reported past-month use; consumption rates were significantly lower for underage students (past-year use: 72.8%; past-month use: 51.7%) than those ages 21 and older (past-year use: 88.4%; past-month use: 71.6%). Similarly, past-month binge drinking prevalence (overall 47.7%) was significantly lower for underage students (42.3%) than those ages 21 and older (54.8%) (King & Jun, 2014).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.)

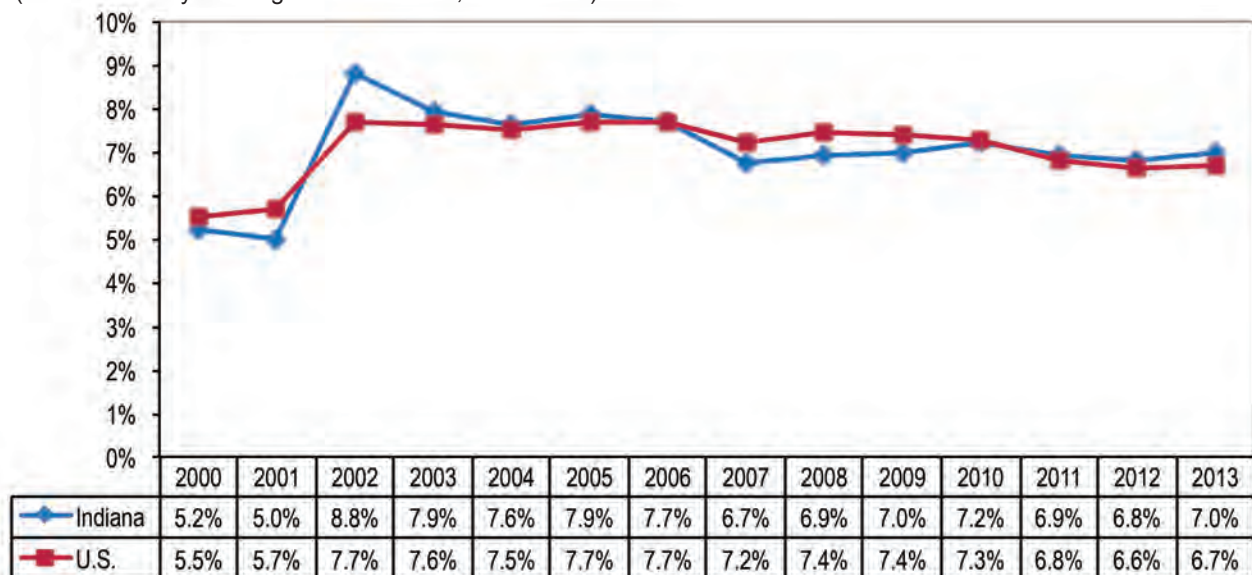
CONSEQUENCES

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 health compromising behaviors, such as cigarette smoking, illicit drug use, and risky sex. Chronic alcohol use can lead to the development of cirrhosis and other serious liver diseases.

Alcohol Abuse and Dependence

Based on 2012–2013 NSDUH averages, the estimated prevalence for alcohol abuse and/or dependence³ in the past year among those ages 12 and older was 7.0% (95% CI: 5.9–8.3) in Indiana, which was similar to the national estimate (6.7%; 95% CI: 6.5–6.9). Since at least 2000, Indiana's alcohol abuse/dependence prevalence rates have been similar to U.S. rates (see Figure 3.7). Of all age groups, adults ages 18 to 25 reported the highest prevalence rates both in Indiana and nationally across all years reviewed. Additionally, an estimated 6.9% (95% CI: 5.8–8.2) of those ages 12 and older were in need of but did not receive treatment for alcohol use in Indiana (U.S.: 6.4%; 95% CI: 6.2–6.6) (Substance Abuse and Mental Health Services Administration, 2014).

Figure 3.7 Percentage of Indiana and U.S. Population Ages 12 and Older with Alcohol Abuse and/or Dependence (National Survey on Drug Use and Health, 2000–2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

²Twelve Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

³The 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 (59.4%) of Indiana treatment episodes in 2012, alcohol use was reported (U.S.: 56.6%), and in more than one-third (40.1%), alcohol dependence⁴ was indicated (U.S.: 38.9%) (see Figure 3.8) (Substance Abuse and Mental Health Data Archive, 2012).

Factors significantly associated with alcohol abuse and dependence in Indiana included gender, race/ethnicity, and age (findings from the 2012 TEDS dataset):

Gender—Almost 45 percent of males (44.8%) in substance abuse treatment listed alcohol as their primary substance, compared to 32.1% of females ($P < 0.001$).

Race/ethnicity—Over one-third of whites (39.2%) reported alcohol as their primary substance; this percentage was below that for blacks (43.2%) and other

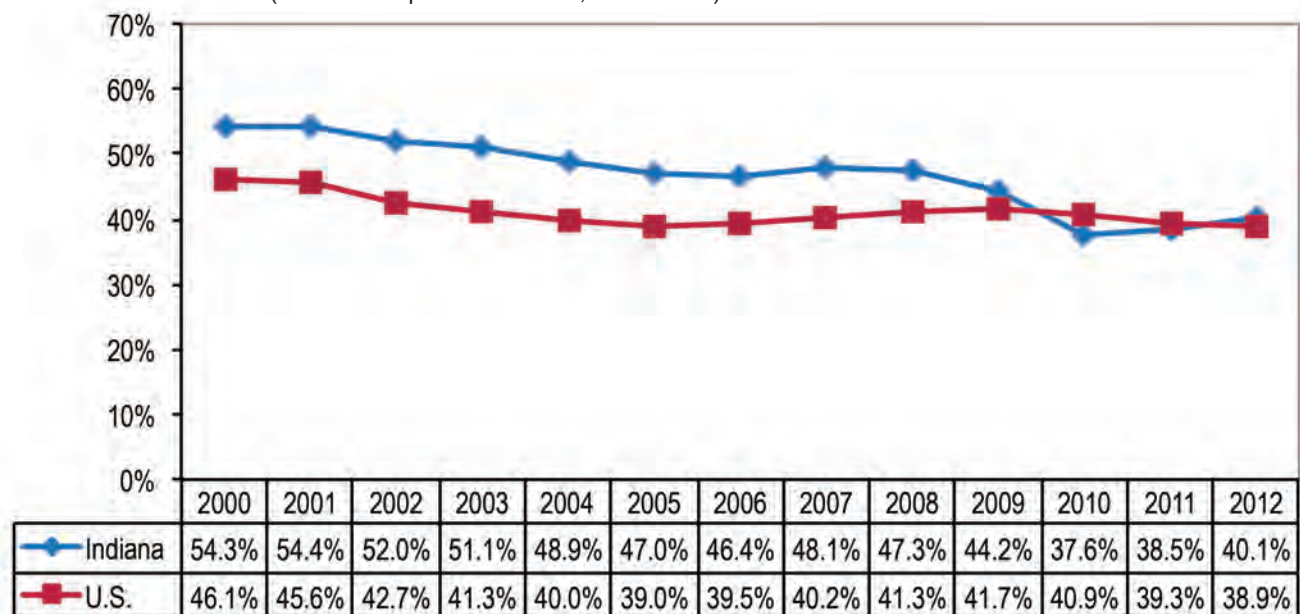
racers (46.7%) ($P < 0.001$). With regard to ethnicity, a significantly higher percentage of Hispanics (46.8%) reported alcohol dependence than non-Hispanics (40.1%) ($P < 0.001$).

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 (17.9%) and those ages 55 and older had the highest percentage (68.1%) ($P < 0.001$).

Table 3.3 depicts the percentage of Indiana residents, categorized by gender, race, ethnicity, and age group, in treatment for alcohol abuse and dependence.

See Appendix 3B, page 43, for county-level treatment data.

Figure 3.8 Percentage of Treatment Episodes in Indiana and the United States with Alcohol Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

⁴We 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, 2012)

		Alcohol Dependence
Gender	Male	44.8%
	Female	32.1%
Race	White	39.2%
	Black	43.2%
	Other	46.7%
Ethnicity	Hispanic	46.8%
	Non-Hispanic	40.1%
Age Group	Under 18	17.9%
	18-24	29.9%
	25-34	33.1%
	35-44	47.1%
	45-54	60.7%
	55+	68.1%
Total		40.1%

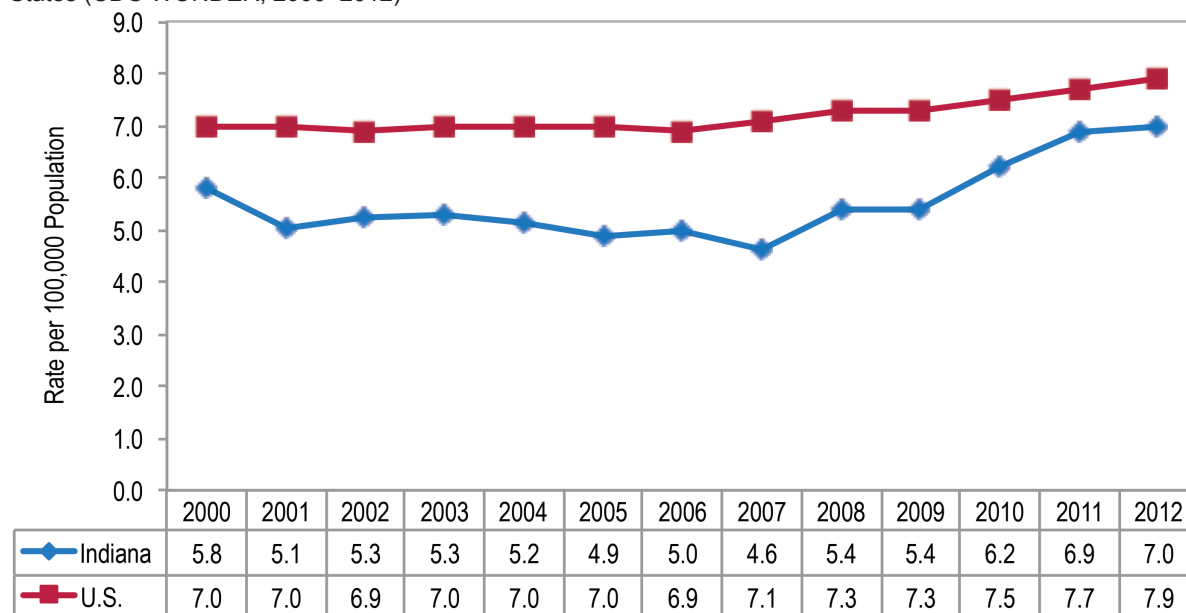
Source: Substance Abuse and Mental Health Data Archive, 2012

Alcohol-Related Morbidity and Mortality

Hospital discharge records show that in 2013, a total of 1,673 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, 2013).⁵

From 2000 through 2012, a total of 4,759 Hoosiers died from alcohol-induced causes (Centers for Disease Control and Prevention, 2014).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 7.0 per 100,000 (95% CI: 6.4–7.6) in 2012, which was significantly lower than the U.S. rate of 7.9 per 100,000 population (95% CI: 7.8–8.0) (see Figure 3.9) (Centers for Disease Control and Prevention, 2014).

Figure 3.9 Age-Adjusted Alcohol-attributable Mortality Rates per 100,000 Population in Indiana and the United States (CDC WONDER, 2000–2012)



Source: Centers for Disease Control and Prevention, 2014

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

⁶Alcohol-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.

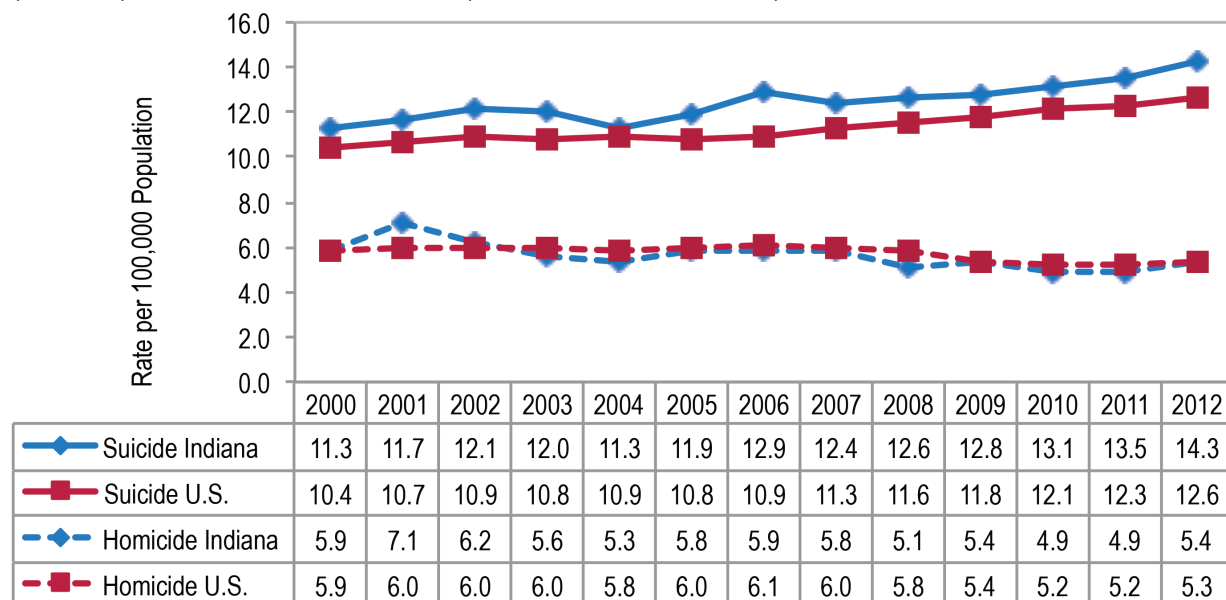
Though alcohol use is not associated with every suicide and homicide, these violent acts often involve individuals who have been drinking. According to the Alcohol-Related Disease Impact (ARDI) database, the direct alcohol-attributable fraction for suicides and homicides, both in Indiana and in the nation,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

From 2000 through 2012, a total of 10,253 Hoosiers died by suicide. Applying ARDI's alcohol-attributable fraction of 23%, this means that during these 12 years, a total of 2,358 suicide deaths were attributable to alcohol. Indiana's age-adjusted mortality rate for suicide was 14.3 per 100,000 population (95% CI: 13.3–15.2) in 2012, a rate statistically higher than the U.S. rate of 12.6 per 100,000

population (95% CI: 12.4–12.7) (see Figure 3.10). Rates were significantly higher for males (23.5 per 100,000 population; 95% CI: 21.8–25.2) than for females (5.7 per 100,000 population; 95% CI: 4.9–6.5), and for whites (15.3 per 100,000 population; 95% CI: 14.3–16.3) than for blacks (6.1 per 100,000 population; 95% CI: 4.2–8.4) in Indiana (Centers for Disease Control and Prevention, 2014).

From 2000 through 2012, a total of 4,597 homicides were committed in Indiana. Applying ARDI's alcohol-attributable fraction of 47%, this means that 2,161 homicide deaths were attributable to alcohol during that time period. Indiana's age-adjusted homicide death rate was 5.4 per 100,000 population (95% CI: 4.9–6.0) in 2012, which was statistically similar to the U.S. rate of 5.3 per 100,000 population (95% CI: 5.2–5.4) (see Figure 3.10). In 2012, rates were significantly higher for Indiana males (8.2 per 100,000 population; 95% CI: 7.2–9.2) than for females (2.7 per 100,000 population; 95% CI: 2.1–3.3), and for blacks (25.7 per 100,000 population; 95% CI: 21.8–29.6) than for whites (3.0 per 100,000 population; 95% CI: 2.5–3.5) (Centers for Disease Control and Prevention, 2014).

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, 2000–2012)



Source: Centers for Disease Control and Prevention, 2014

⁷Intentional self-harm (suicide) includes ICD-10 codes X60–X84.

⁸Assault (homicide) includes ICD-10 codes X85–Y09.

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 2006 through 2010, 175 children were born with fetal alcohol syndrome,⁹ the most severe form of FASD, in Indiana (Indiana State Department of Health, 2006-2010).

Alcohol-Related Motor Vehicle Accidents

According to the Fatality Analysis Reporting System (FARS), a total of 718 fatal crashes occurred in Indiana in 2012, of which 214 (or 30%) were alcohol-related (U.S.: 9,364 alcohol-related crashes; 30%) (National Highway Traffic Safety Administration, 2012). 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 driving¹⁰ 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 8,159 in 2013. This represents a 41% drop. The number of fatal crashes with alcohol involvement also decreased from 242 to 180. (For a detailed listing of alcohol-related collisions and fatalities in Indiana by county for 2013, see Appendix 3D, pages 44-46). The overall rate for alcohol-related collisions in Indiana in 2013 was 1.2 per 1,000 population (Indiana State Police, 2014).

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

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

Table 3.4 Number of Fatal Crashes and Percent Alcohol-Related in Indiana, by Time of Day and Crash Type (Fatality Analysis Reporting System, 2012)

Time of Crash	Single Vehicle			Multiple Vehicle			All Crashes		
	Number	Alcohol-impaired driving	Percent Alcohol-impaired driving	Number	Alcohol-impaired driving	Percent Alcohol-impaired driving	Number	Alcohol-impaired driving	Percent Alcohol-impaired driving
Midnight to 2:59 a.m.	60	36	60%	18	12	68%	78	49	62%
3 a.m. to 5:59 a.m.	58	33	57%	13	7	50%	71	39	55%
6 a.m. to 8:59 a.m.	38	9	23%	36	4	10%	74	13	17%
9 a.m. to 11:59 a.m.	30	2	7%	39	3	8%	69	5	8%
Noon to 2:59 p.m.	40	6	14%	61	5	8%	101	11	10%
3 p.m. to 5:59 p.m.	54	11	20%	72	11	16%	126	22	17%
6 p.m. to 8:59 p.m.	67	25	38%	50	13	26%	117	38	33%
9 p.m. to 11:59 p.m.	49	21	43%	33	16	48%	82	37	45%
Total	396	143	36%	322	70	22%	718	214	30%

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

Source: National Highway Traffic Safety Administration, 2012

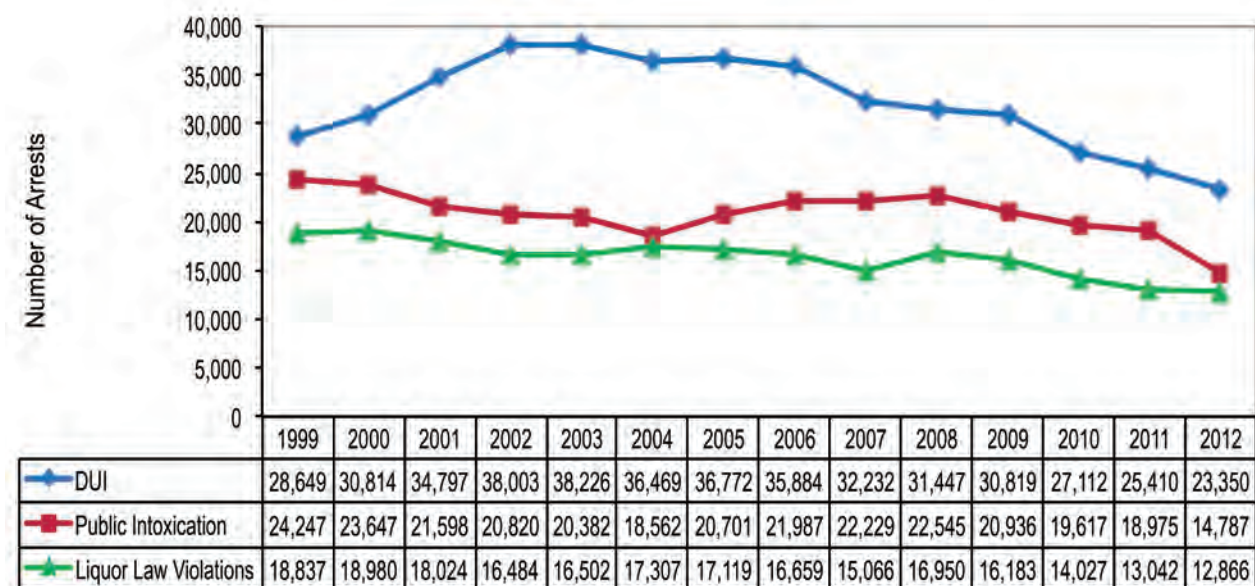
Alcohol-Related Crimes

Using the Uniform Crime Reporting Program (UCR) dataset, we compared alcohol-related offenses, including arrests for driving under the influence (DUI; commonly known as “drunk driving”), public intoxication (“public drunkenness”), and liquor law violations (i.e., violations of alcohol-related policies by the alcohol retail industry, including selling/furnishing alcohol to minors; minimum age of employee selling/serving alcohol; etc.), between Indiana and the United States (National Archive of Criminal Justice Data, Interuniversity Consortium for Political and Social Research, University of Michigan, 2012). In 2012, a total of 23,350 DUI arrests were made in Indiana. The arrest rate was statistically similar between Hoosiers, at 3.6 per 1,000 population (95% CI:

3.5–3.6), and U.S. residents, at 3.5 per 1,000 population (95% CI: 3.5–3.5). Close to 15,000 Hoosiers were arrested for public intoxication; the arrest rate was almost twice as high for Indiana, at 2.3 per 1,000 population (95% CI: 2.2–2.3), as for the nation, at 1.3 per 1,000 population (95% CI: 1.3–1.3). Additionally, almost 13,000 arrests occurred for liquor law violations in Indiana, representing an arrest rate of 2.0 per 1,000 population (95% CI: 1.9–2.0), which was significantly higher than the U.S. rate of 1.2 per 1,000 population (95% CI: 1.2–1.2) (see Figures 3.11–3.14).

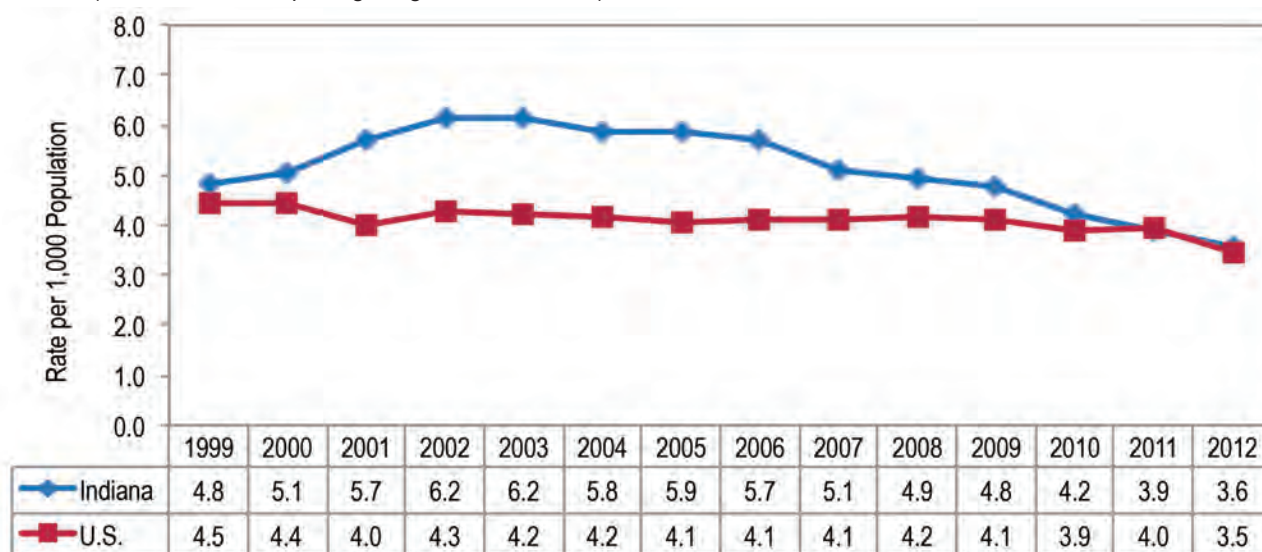
Arrests for alcohol-related crimes varied among Indiana counties. These county differences are presented in Maps 3.2 through 3.4 (pages 50–52) and Appendix 3E (pages 47–48).

Figure 3.11 Number of Arrests for Driving Under the Influence (DUI), Public Intoxication, and Liquor Law Violations in Indiana (Uniform Crime Reporting Program, 1999–2012)



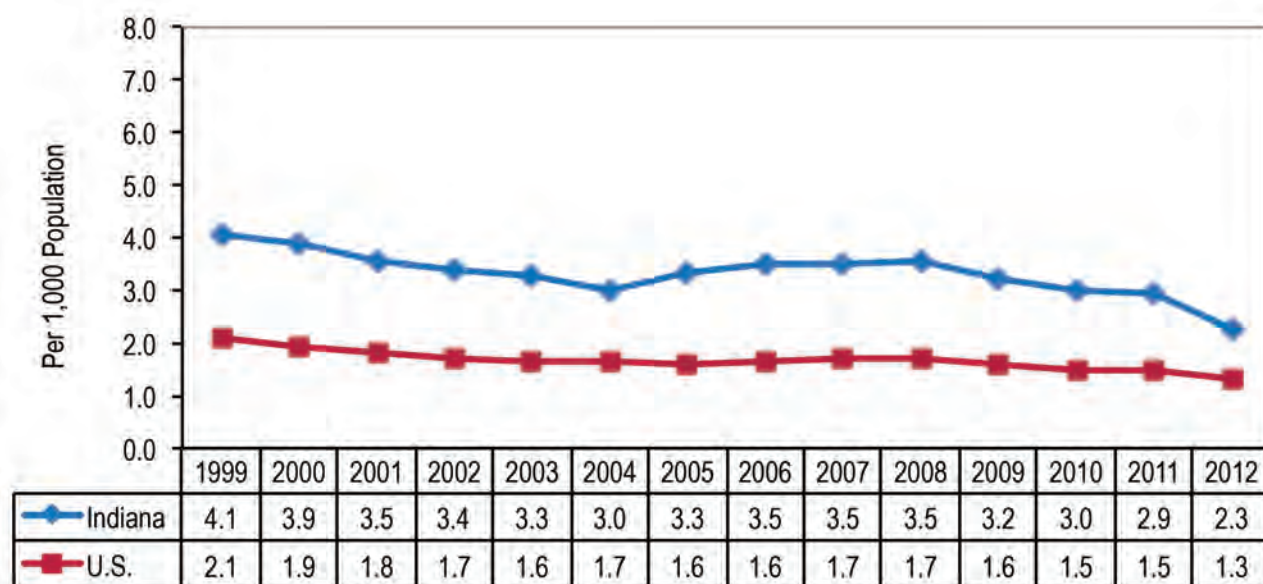
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Figure 3.12 Arrest Rates, per 1,000 Population, for Driving Under the Influence (DUI) in Indiana and the United States (Uniform Crime Reporting Program, 1999–2012)



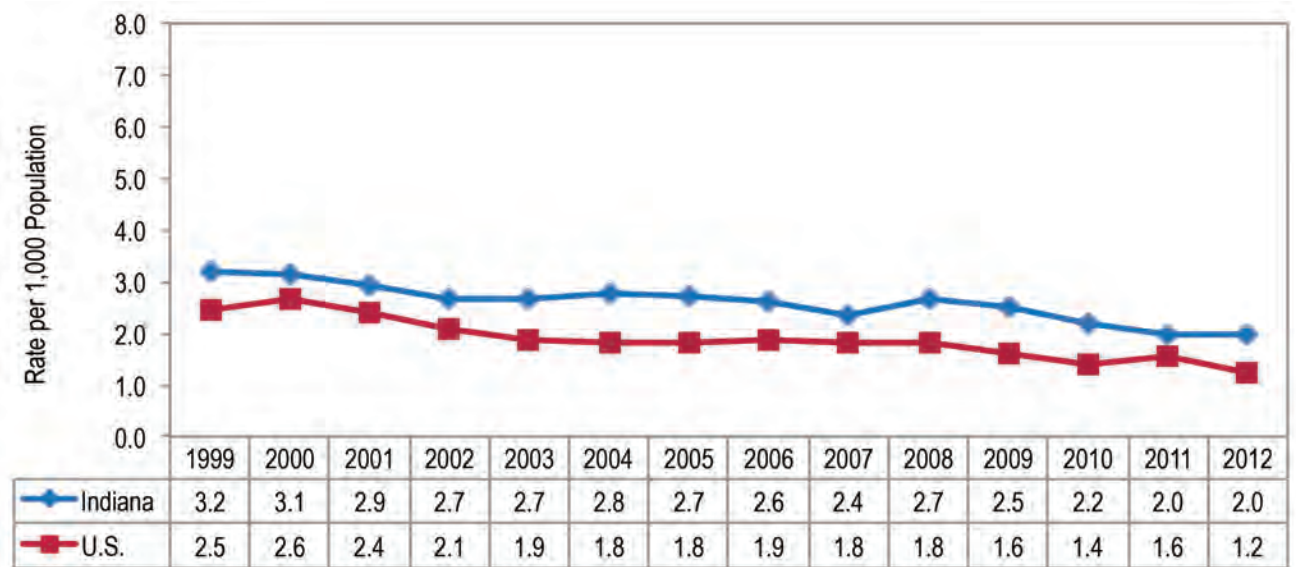
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Figure 3.13 Arrest Rates, per 1,000 Population, for Public Intoxication in Indiana and the United States (Uniform Crime Reporting Program, 1999–2012)



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Figure 3.14 Arrest Rates, per 1,000 Population, for Liquor Law Violation in Indiana and the United States (Uniform Crime Reporting Program, 1999–2012)



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	12.1	12.3	12.9	10.1	17.8*	12.2	10.8	11.5	10.6*
	Monthly	3.8	4.2	3.6	3.4	4.7	3.8	3.1	3.5	3.6
	Binge	5.4	6.7*	4.7	2.6*	6.0	6.1	4.1	3.8*	4.7
7th Grade	Lifetime	18.8	22.3*	20.0	14.1*	18.4	14.5*	18.5	17.6	22.5*
	Monthly	7.1	9.2*	7.6	4.7	6.4	5.2*	5.9	6.4	8.9*
	Binge	6.3	8.7*	6.7	5.4	5.0*	5.8	5.4	4.9*	6.2
8th Grade	Lifetime	29.5	31.1*	34.2*	20.4*	28.6	27.3*	34.4*	25.8*	32.6*
	Monthly	12.2	14.0*	14.2*	5.9*	10.9	11.1*	15.5*	10.1*	13.4
	Binge	9.0	9.6	10.6*	4.1*	7.9	8.8	9.8	8.1*	9.7
9th Grade	Lifetime	38.2	42.4*	36.7	35.4	36.7	33.7*	38.0	37.7	44.3*
	Monthly	17.1	19.7*	14.9*	17.8	16.3	13.6*	17.1	15.8	23.6*
	Binge	10.9	13.2*	9.7	11.5	9.3*	9.2*	11.2	10.2	14.2*
10th Grade	Lifetime	47.9	51.5*	49.1	43.2*	47.3	42.4*	46.1	45.7*	54.1*
	Monthly	22.6	24.6*	23.8	21.9	20.7	18.8*	19.5*	21.8	27.0*
	Binge	14.4	15.6	15.0	12.2	13.5	11.1*	13.6	15.2	16.8*
11th Grade	Lifetime	53.8	59.2*	50.7*	42.7*	50.0*	50.3*	51.0	52.5	60.6*
	Monthly	25.8	29.6*	23.2*	20.5*	23.8	23.0*	21.7*	26.8	30.0*
	Binge	16.8	18.5*	15.2	13.1	15.7	14.6*	13.7*	17.5	20.3*
12th Grade	Lifetime	61.7	65.6*	60.2	51.1*	57.7*	58.2*	65.0	59.6*	66.4*
	Monthly	33.9	34.6	31.9	27.5*	31.0	31.7*	33.6	34.7	38.3*
	Binge	22.3	22.3	20.2*	18.8	19.6*	20.4*	19.7	23.9	26.4*

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

Source: Gassman, et al., 2014

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, 2014)

	Treatment Episodes	Alcohol Use		Alcohol Dependence	
County	Total	Number	%	Number	%
Adams	151	121	80.1%	97	64.2%
Allen	1,717	1,275	74.3%	744	43.3%
Bartholomew	672	337	50.1%	212	31.5%
Benton	49	34	69.4%	21	42.9%
Blackford	58	26	44.8%	19	32.8%
Boone	227	107	47.1%	83	36.6%
Brown	91	43	47.3%	33	36.3%
Carroll	102	58	56.9%	38	37.3%
Cass	277	222	80.1%	150	54.2%
Clark	475	161	33.9%	141	29.7%
Clay	189	112	59.3%	72	38.1%
Clinton	201	107	53.2%	60	29.9%
Crawford	62	40	64.5%	19	30.6%
Daviess	151	84	55.6%	65	43.0%
Dearborn	508	313	61.6%	193	38.0%
Decatur	176	112	63.6%	82	46.6%
DeKalb	241	143	59.3%	111	46.1%
Delaware	1,037	504	48.6%	346	33.4%
Dubois	278	209	75.2%	148	53.2%
Elkhart	722	415	57.5%	286	39.6%
Fayette	216	106	49.1%	68	31.5%
Floyd	232	56	24.1%	49	21.1%
Fountain	57	26	45.6%	14	24.6%
Franklin	181	119	65.7%	67	37.0%
Fulton	217	158	72.8%	90	41.5%
Gibson	228	154	67.5%	108	47.4%
Grant	495	316	63.8%	188	38.0%
Greene	201	112	55.7%	68	33.8%
Hamilton	987	652	66.1%	448	45.4%
Hancock	207	119	57.5%	85	41.1%
Harrison	36	11	30.6%	10	27.8%
Hendricks	365	165	45.2%	130	35.6%
Henry	358	149	41.6%	98	27.4%
Howard	683	327	47.9%	201	29.4%
Huntington	97	59	60.8%	43	44.3%
Jackson	323	134	41.5%	75	23.2%
Jasper	111	45	40.5%	32	28.8%
Jay	98	56	57.1%	34	34.7%
Jefferson	380	167	43.9%	121	31.8%
Jennings	288	130	45.1%	80	27.8%
Johnson	239	127	53.1%	76	31.8%
Knox	309	184	59.5%	125	40.5%
Kosciusko	270	189	70.0%	114	42.2%
LaGrange	165	127	77.0%	83	50.3%
Lake	2,671	1,696	63.5%	1,306	48.9%
LaPorte	557	304	54.6%	218	39.1%
Lawrence	474	177	37.3%	146	30.8%
Madison	1,064	553	52.0%	354	33.3%
Marion	4,375	2,055	47.0%	1,313	30.0%
Marshall	255	144	56.5%	92	36.1%
Martin	51	23	45.1%	13	25.5%
Miami	305	189	62.0%	120	39.3%
Monroe	1,364	800	58.7%	624	45.7%
Montgomery	317	134	42.3%	97	30.6%
Morgan	477	184	38.6%	121	25.4%
Newton	38	19	50.0%	16	42.1%
Noble	220	141	64.1%	96	43.6%
Ohio	44	27	61.4%	16	36.4%
Orange	139	69	49.6%	56	40.3%
Owen	203	110	54.2%	85	41.9%
Parke	97	57	58.8%	43	44.3%
Perry	133	93	69.9%	70	52.6%
Pike	43	24	55.8%	19	44.2%
Porter	709	342	48.2%	212	29.9%
Posey	133	107	80.5%	66	49.6%
Pulaski	119	83	69.7%	55	46.2%
Putnam	229	110	48.0%	90	39.3%
Randolph	192	110	57.3%	82	42.7%
Ripley	249	166	66.7%	111	44.6%
Rush	160	92	57.5%	55	34.4%
Saint Joseph	1,543	929	60.2%	574	37.2%
Scott	130	31	23.8%	25	19.2%
Shelby	157	61	38.9%	44	28.0%
Spencer	169	122	72.2%	71	42.0%
Starke	247	107	43.3%	48	19.4%
Steuben	214	152	71.0%	109	50.9%
Sullivan	80	44	55.0%	26	32.5%
Switzerland	67	41	61.2%	27	40.3%
Tippecanoe	453	277	61.1%	196	43.3%
Tipton	65	28	43.1%	19	29.2%
Union	40	17	42.5%	8	20.0%
Vanderburgh	1,377	845	61.4%	590	42.8%
Vermillion	114	64	56.1%	40	35.1%
Vigo	729	410	56.2%	232	31.8%
Wabash	244	152	62.3%	98	40.2%
Warren	21	11	52.4%	8	38.1%
Warrick	328	213	64.9%	137	41.8%
Washington	95	32	33.7%	30	31.6%
Wayne	455	242	53.2%	162	35.6%
Wells	127	93	73.2%	61	48.0%
White	161	95	59.0%	52	32.3%
Whitley	104	81	77.9%	45	43.3%
County Info Missing	99	56	56.6%	42	42.4%
Indiana	35,764	20,023	56.0%	13,447	37.6%

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

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

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

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 3C

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

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

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

APPENDIX 3D

Number and Rate (per 1,000) of All and Fatal Alcohol-Related Collisions in Indiana, by County (Automated Reporting Information Exchange System, 2013)

County	All Collisions			Fatal Collisions		
	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Adams	636	28	0.81	2	0	*0.00
Allen	11,426	511	1.41	26	9	*0.02
Bartholomew	2,065	61	0.77	5	1	*0.01
Benton	143	6	*0.68	1	0	*0.00
Blackford	309	9	*0.72	1	0	*0.00
Boone	1,842	59	0.98	7	0	*0.00
Brown	574	27	1.80	4	2	*0.13
Carroll	523	19	*0.95	8	1	*0.05
Cass	1,124	47	1.22	5	1	*0.03
Clark	4,304	155	1.37	8	5	*0.04
Clay	790	42	1.57	6	2	*0.07
Clinton	1,058	57	1.73	6	2	*0.06
Crawford	267	11	*1.04	4	2	*0.19
Daviess	382	39	1.20	6	1	*0.03
Dearborn	1,801	104	2.08	8	2	*0.04
Decatur	847	35	1.33	6	0	*0.00
DeKalb	1,293	47	1.11	6	1	*0.02
Delaware	3,966	159	1.35	9	2	*0.02
Dubois	1,463	60	1.42	8	3	*0.07
Elkhart	6,952	226	1.13	20	3	*0.01
Fayette	482	30	1.26	2	0	*0.00
Floyd	2,453	109	1.43	4	2	*0.03
Fountain	479	23	1.36	4	0	*0.00

(Continued on next page)

APPENDIX 3D (Continued from previous page)

County	All Collisions			Fatal Collisions		
	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Franklin	489	37	1.61	4	2	*0.09
Fulton	610	19	*0.93	2	1	*0.05
Gibson	1,128	44	1.31	3	0	*0.00
Grant	2,232	63	0.91	9	1	*0.01
Greene	864	32	0.98	5	2	*0.06
Hamilton	7,021	274	0.92	13	4	*0.01
Hancock	1,475	79	1.10	4	1	*0.01
Harrison	1,209	41	1.05	14	1	*0.03
Hendricks	3,692	140	0.91	9	3	*0.02
Henry	1,039	45	0.92	8	0	*0.00
Howard	2,258	118	1.43	8	3	*0.04
Huntington	1,088	44	1.20	5	0	*0.00
Jackson	1,711	62	1.43	7	2	*0.05
Jasper	1,259	55	1.65	12	5	*0.15
Jay	718	27	1.27	5	1	*0.05
Jefferson	934	44	1.36	5	0	*0.00
Jennings	810	32	1.13	9	2	*0.07
Johnson	2,950	128	0.88	12	4	*0.03
Knox	897	52	1.37	7	2	*0.05
Kosciusko	2,466	99	1.27	6	2	*0.03
LaGrange	945	35	0.92	8	2	*0.05
Lake	16,012	795	1.62	40	16	*0.03
LaPorte	3,341	189	1.70	16	7	*0.06
Lawrence	1,407	58	1.27	7	0	*0.00
Madison	3,702	142	1.09	9	2	*0.02
Marion	28,732	1,093	1.18	69	17	*0.02
Marshall	1,338	52	1.10	12	1	*0.02
Martin	157	12	*1.18	1	1	*0.10
Miami	944	43	1.19	7	2	*0.06
Monroe	4,064	173	1.22	5	2	*0.01
Montgomery	1,005	41	1.07	3	0	*0.00
Morgan	1,472	67	0.96	8	4	*0.06
Newton	363	23	1.63	3	0	*0.00
Noble	1,281	51	1.07	8	0	*0.00
Ohio	133	5	*0.83	1	0	*0.00
Orange	661	29	1.47	5	3	*0.15
Owen	551	38	1.79	5	1	*0.05
Parke	533	32	1.86	5	1	*0.06
Perry	410	30	1.53	3	0	*0.00
Pike	190	13	*1.02	1	0	*0.00
Porter	4,815	212	1.27	14	4	*0.02
Posey	578	32	1.26	6	3	*0.12
Pulaski	429	12	*0.92	2	0	*0.00
Putnam	662	22	0.59	6	0	*0.00
Randolph	512	26	1.01	2	0	*0.00
Ripley	748	42	1.48	3	0	*0.00
Rush	290	17	*1.00	0	0	*0.00
Saint Joseph	7,359	300	1.12	17	7	*0.03
Scott	658	24	1.00	9	1	*0.04
Shelby	1,068	56	1.25	9	0	*0.00

(Continued on next page)

APPENDIX 3D *(Continued from previous page)*

County	All Collisions			Fatal Collisions		
	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Spencer	597	29	1.38	4	0	*0.00
Starke	614	23	0.99	2	1	*0.04
Steuben	1,558	59	1.72	3	0	*0.00
Sullivan	446	20	0.94	5	2	*0.09
Switzerland	193	11	*1.05	1	0	*0.00
Tippecanoe	6,997	307	1.70	22	8	*0.04
Tipton	318	12	*0.77	2	1	*0.06
Union	122	8	*1.10	2	0	*0.00
Vanderburgh	6,496	217	1.20	21	7	*0.04
Vermillion	329	23	1.45	1	1	*0.06
Vigo	3,231	166	1.53	11	3	*0.03
Wabash	951	31	0.96	6	1	*0.03
Warren	244	14	*1.66	1	1	*0.12
Warrick	1,268	57	0.93	3	1	*0.02
Washington	690	40	1.44	10	1	*0.04
Wayne	2,238	88	1.30	13	2	*0.03
Wells	642	23	0.83	2	1	*0.04
White	835	31	1.27	4	0	*0.00
Whitley	852	37	1.11	3	1	*0.03
County Not Reported	3	0	N/A	0	0	N/A
Indiana	193,013	8,159	1.24	703	180	0.03

* Rates based on numbers lower than 20 are unreliable.

Source: Indiana State Police, 2014

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, 2012)

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

(continued on next page)

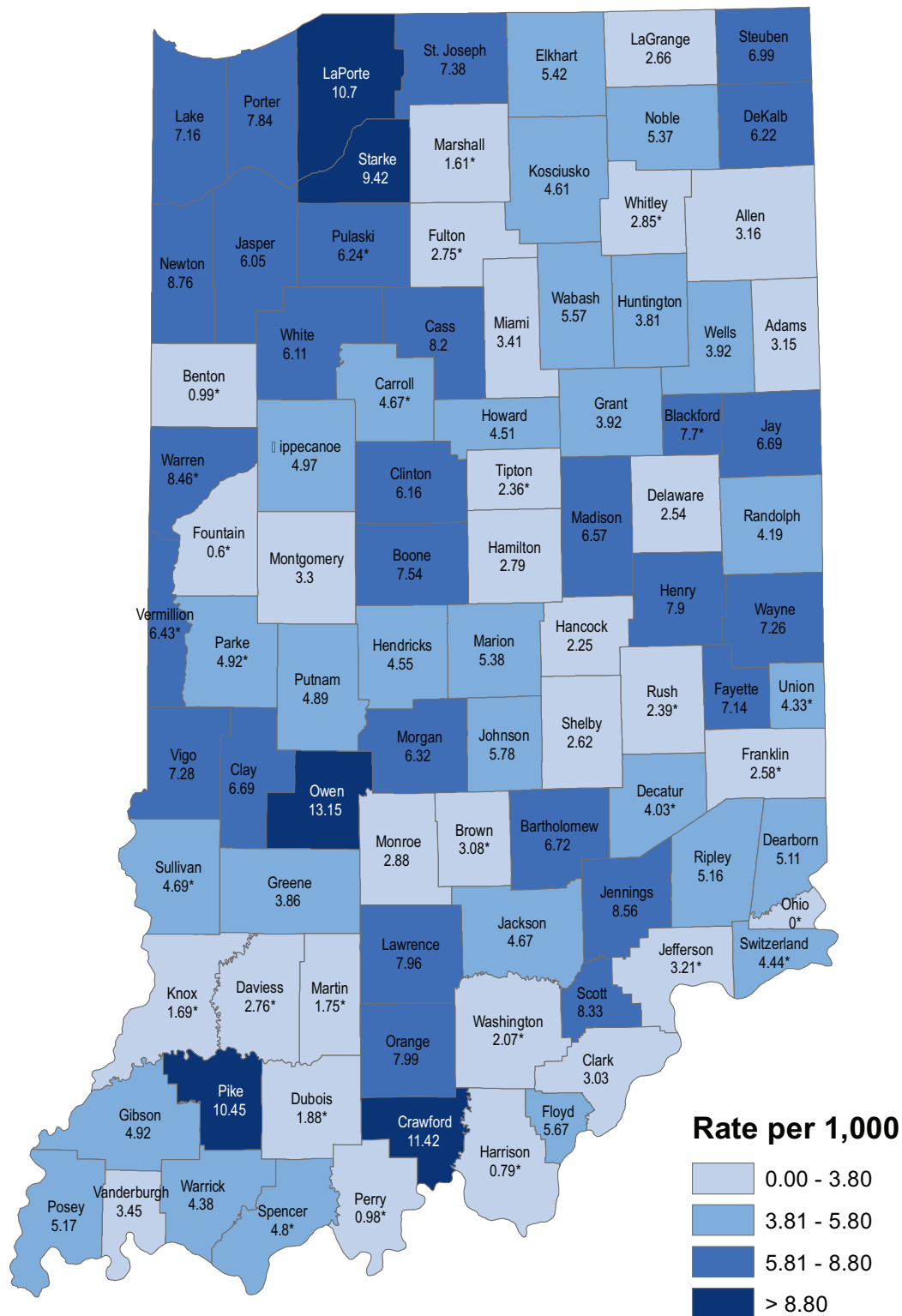
APPENDIX 3E *(Continued from previous page)*

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

* Rates based on arrest numbers lower than 20 are unreliable.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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

50



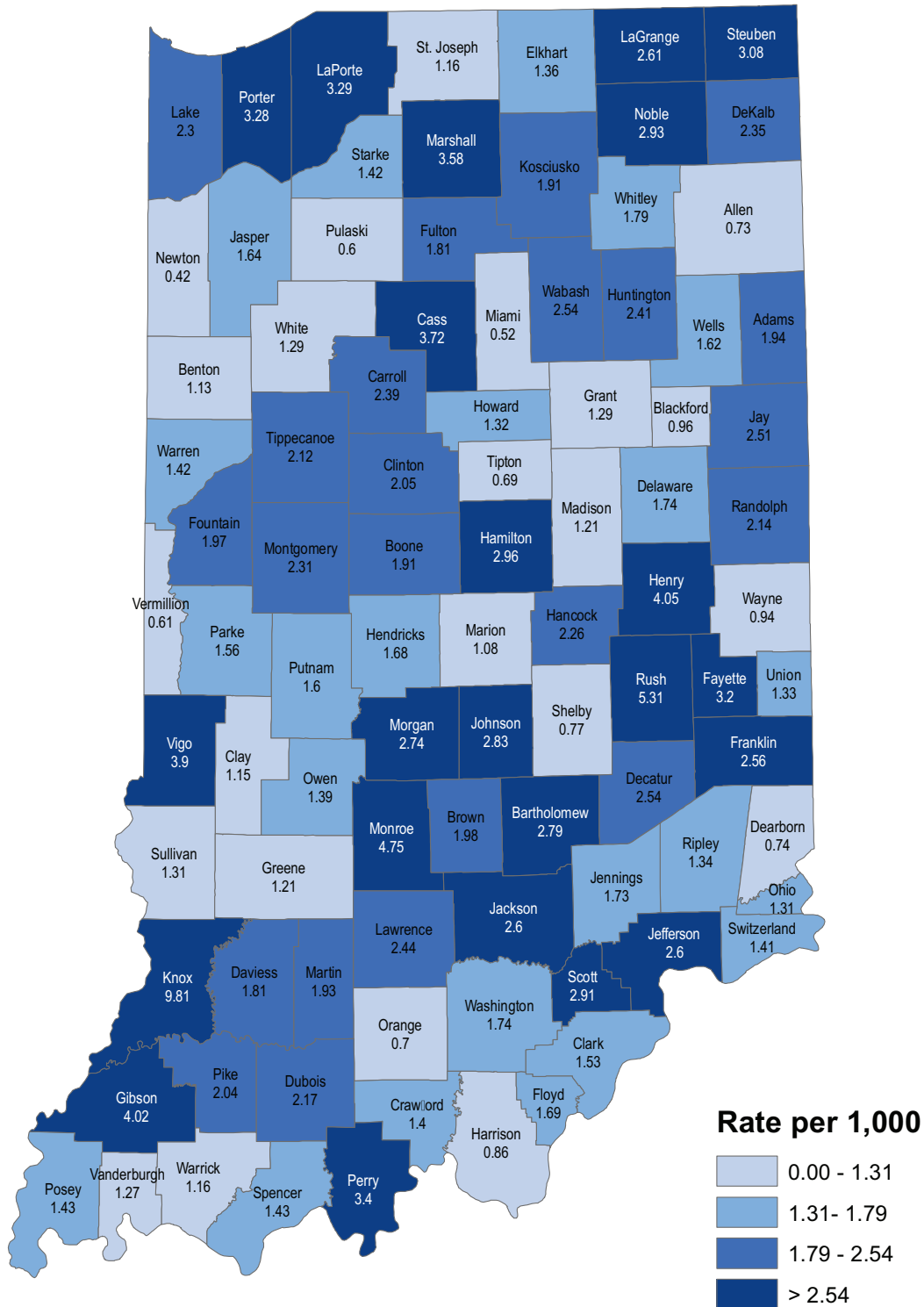
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Indiana University Center for Health Policy



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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



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, 2012

REFERENCES, CHAPTER 3

- Alcohol and Tobacco Commission. (2014). *Number of alcohol sales licenses in Indiana by county, 2014*. Data received January 14, 2015, from the Indiana Prevention Resource Center.
- Centers for Disease Control and Prevention. (2006-2010). *Alcohol-related disease impact (ARDI)*. Retrieved from http://apps.nccd.cdc.gov/DACH_ARDI/Default/Default.aspx
- Centers for Disease Control and Prevention. (2013). *Behavioral Risk Factor Surveillance System Survey Data*. Retrieved from <http://apps.nccd.cdc.gov/brfss/>
- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Centers for Disease Control and Prevention. (2014). *CDC WONDER underlying cause of death (compressed mortality)*. Retrieved from <http://wonder.cdc.gov/>
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., & Oi, S. E. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana Department of Education. (2007-2008). *School data*. Retrieved from <http://dew4.doe.state.in.us/htbin/sas1.sh>
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Data received January 20, 2015, from Indiana Family and Social Services Administration.
- Indiana State Department of Health. (2013). *Indiana hospital discharge data, 2013*. Retrieved from <http://www.in.gov/isdh/20624.htm>
- Indiana State Department of Health. (2006-2010). *Table 1: Number of Children Reported to IBDPR by Birth Year*. Retrieved from <http://www.in.gov/isdh/20425.htm>
- Indiana State Police. (2014). *Automated Reporting Information Exchange System (ARIES), Vehicle Crash Records System, 2014*. Data received November 21, 2014, from the Center for Criminal Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University–Purdue University Indianapolis.
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- King, R.A., & Jun, M.K. (2014). *Results of the Indiana College Substance Use Survey–2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2012). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- National Highway Traffic Safety Administration. (2012). *Fatality Analysis Reporting System (FARS)*. Retrieved from <http://www-fars.nhtsa.dot.gov/Main/index.aspx>
- National Institute on Alcohol Abuse and Alcoholism. (2014). *Apparent per capita alcohol consumption: National, state, and regional trends, 1977–2012*. Retrieved from <http://pubs.niaaa.nih.gov/publications/surveillance98/CONS12.pdf>
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>
- Substance Abuse and Mental Health Services Administration, Fetal Alcohol Spectrum Disorders Center for Excellence. (2007). *Fetal Alcohol Spectrum Disorders by the numbers*. Retrieved from http://www.fascenter.samhsa.gov/documents/WYNK_Numbers.pdf
- Substance Abuse and Mental Health Services Administration. (2013). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh/reports>

4

TOBACCO USE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

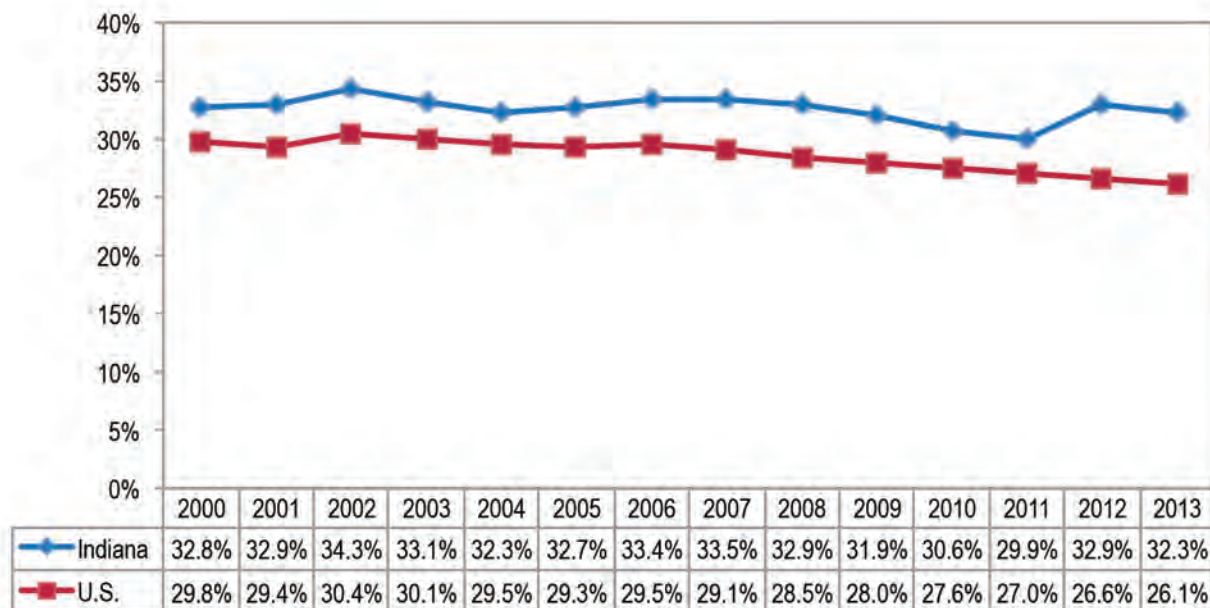
TOBACCO CONSUMPTION

The harmful effects of tobacco on population health have been widely studied. Cigarette smoking remains the leading cause of preventable death in the United States, accounting for approximately one of every five deaths (Centers for Disease Control and Prevention, 2014). Electronic cigarettes (e-cigarettes) and other electronic nicotine delivery devices have surged in popularity in recent years. Although e-cigarettes have been promoted as less dangerous than cigarettes, they have not been approved as safe by the U.S. Food and Drug Administration (FDA) and health effects of exposure to aerosol from e-cigarettes are currently unknown (Tobacco Prevention and Cessation Commission, 2014a).

General Consumption Patterns

The 2013 National Survey on Drug Use and Health (NSDUH) estimates that 32.3% (95% Confidence Interval [CI]: 29.6–35.2) of Indiana residents 12 years and older used a tobacco product in the past month, which was significantly higher than the U.S. rate (26.1%; 25.6–26.6). Tobacco products include cigarettes, smokeless tobacco, cigars, and pipe tobacco. Indiana's rate has remained stable for at least the past 13 years, from 2000 through 2013 (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, 2000–2013)

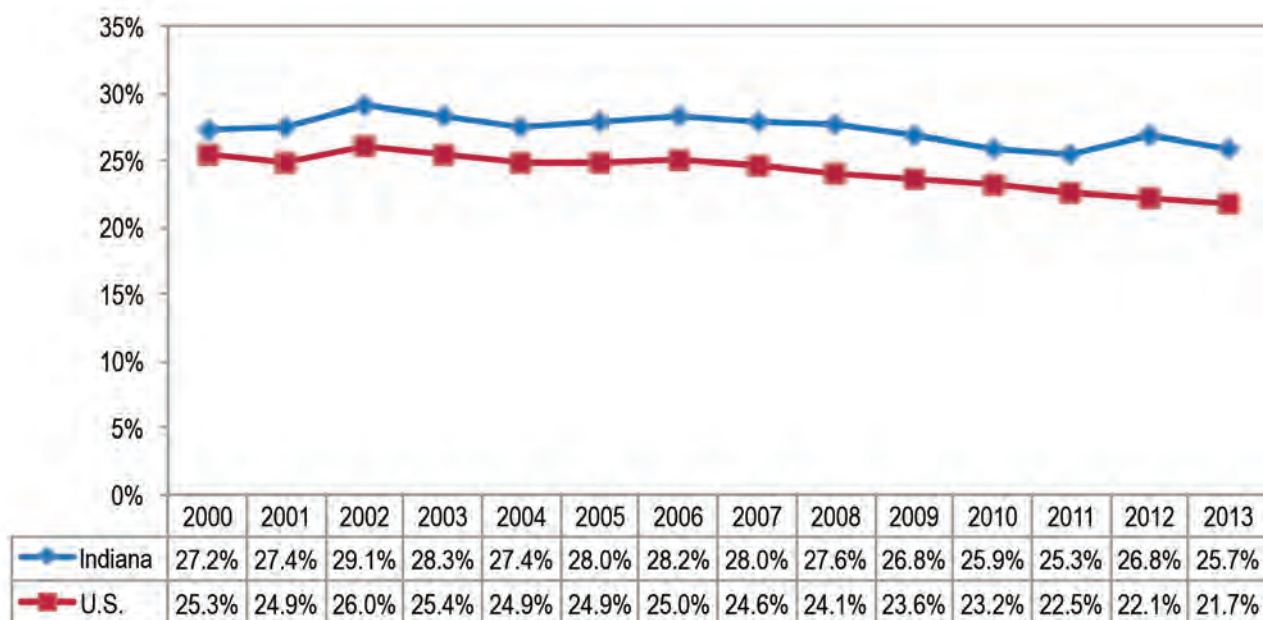


Source: Substance Abuse and Mental Health Services Administration, 2013

The majority of tobacco consumers smoke cigarettes. In 2013, 25.7% (95% CI: 23.4–28.2) of Hoosiers ages 12 years and older admitted to having used cigarettes in the past month, which was significantly

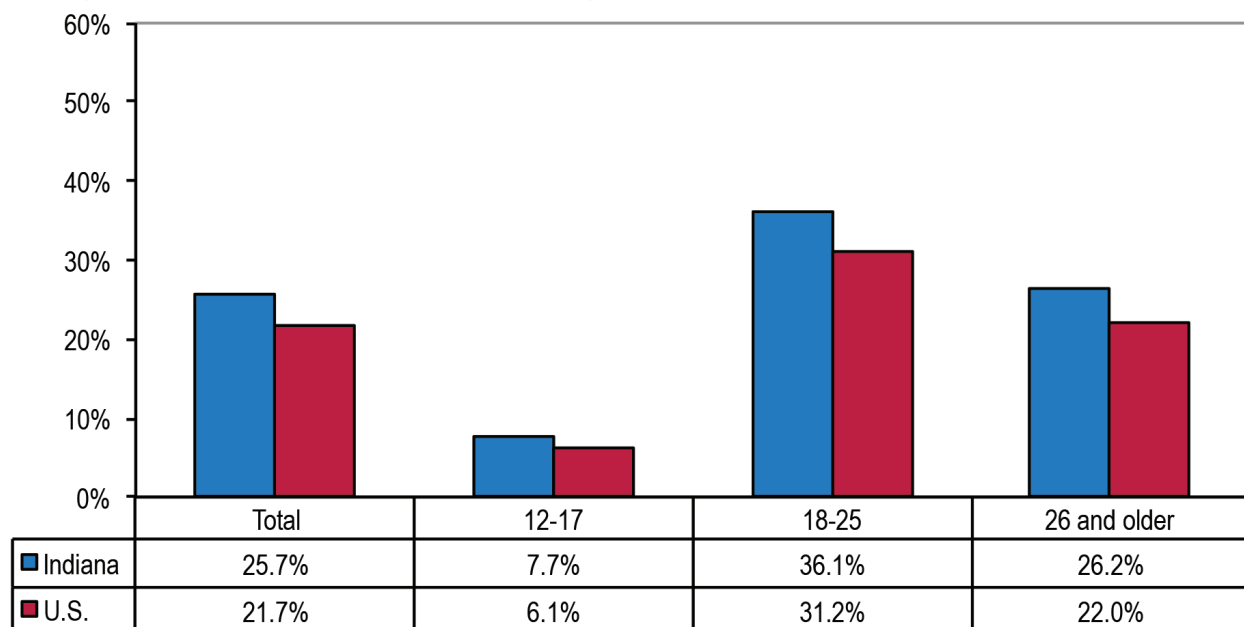
higher than the U.S. rate (21.7%; 95% CI: 21.2–22.1). The smoking prevalence for Indiana remained stable from 2000 (27.2%; 95% CI: 24.7–29.9) to 2013 (see Figure 4.2).

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, 2000–2013)



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, 2013)



Source: Substance Abuse and Mental Health Services Administration, 2013

In Indiana, 67.9% (95% CI: 65.2–70.4) 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 (71.2%; 95% CI: 70.8–71.7) (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, 2014b).

Adult Consumption Patterns

The highest rate of tobacco use was among 18- to 25-year-olds. An estimated 45.0% of Hoosiers in this age group (95% CI: 41.3–48.7) reported currently, i.e., within the past 30 days, using a tobacco product, which was significantly higher than the national rate (37.5%; 95% CI: 36.9–38.2). The 30-day prevalence rate for cigarette smoking among 18- to 25-year-olds was 36.1% (95% CI: 32.7–39.7) in Indiana (U.S.: 31.2%; 95% CI: 30.6–31.9) (see Figure 4.3).

Among Hoosiers ages 26 and older, 32.9% (95% CI: 29.6–36.4) used a tobacco product, and 26.2% (95% CI: 23.4–29.3) smoked cigarettes in the past month. U.S. rates were significantly lower for both tobacco use (26.3%; 95% CI: 25.8–26.9) and cigarette smoking (22.0%; 95% CI: 21.4–22.5) (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 2013 BRFSS, the past-month prevalence rate for adult (18 years and older) smoking in Indiana was 21.9% (95% CI: 20.8–23.1). Moreover, 16.6% (95% CI: 15.6–17.7) of Hoosiers used cigarettes every day. Indiana's smoking prevalence rates were significantly higher than national rates: 19.0% of U.S. residents smoked in the past month and 13.4% reported smoking every day (Centers for Disease Control and Prevention, 2013).

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

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

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

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

Note: U.S. rates are based on median percentages and do not have an associated confidence interval (CI).
Source: Centers for Disease Control and Prevention, 2013

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

The 2013 Indiana Adult Tobacco Survey (IATS) estimated the overall smoking prevalence among Indiana adults at 18.6%. Approximately 15% of adults in Indiana reported ever trying an e-cigarette. However, both current cigarette smokers (49.2%) and former smokers (9.8%) were significantly more likely to have used e-cigarettes in their lifetime than non-smokers (3.6%) (Tobacco Prevention and Cessation Commission, 2014a).

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 2014 survey, 25.2% of Indiana college students reported use of

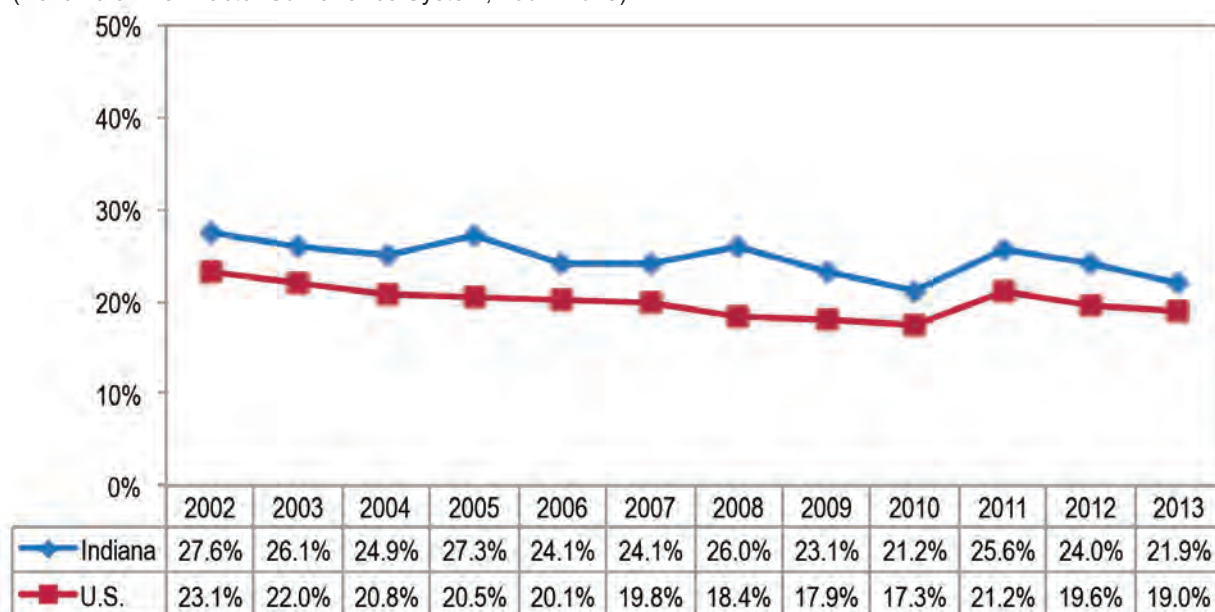
cigarettes in the past year (U.S.: 23.2%; $P > 0.05$), while 13.0% reported current (past-month) use (U.S. 14.0%; $P > 0.05$). Results for the different types of tobacco by demographic characteristics can be found in Table 4.2 (King & Jun, 2014).¹

Youth Consumption Patterns

Based on results from the 2013 NSDUH, 10.3% (95% CI: 8.5–12.5) of Hoosiers ages 12 to 17 used a tobacco product in the past month (U.S.: 8.2%; 95% CI: 7.9–8.6). Of these, 7.7% (95% CI: 6.2–9.5) of young Hoosiers smoked cigarettes (U.S.: 6.1%; 95% CI: 5.8–6.4) (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

Figure 4.4 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Current Cigarette Use (Behavioral Risk Factor Surveillance System, 2002–2013)



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, 2013

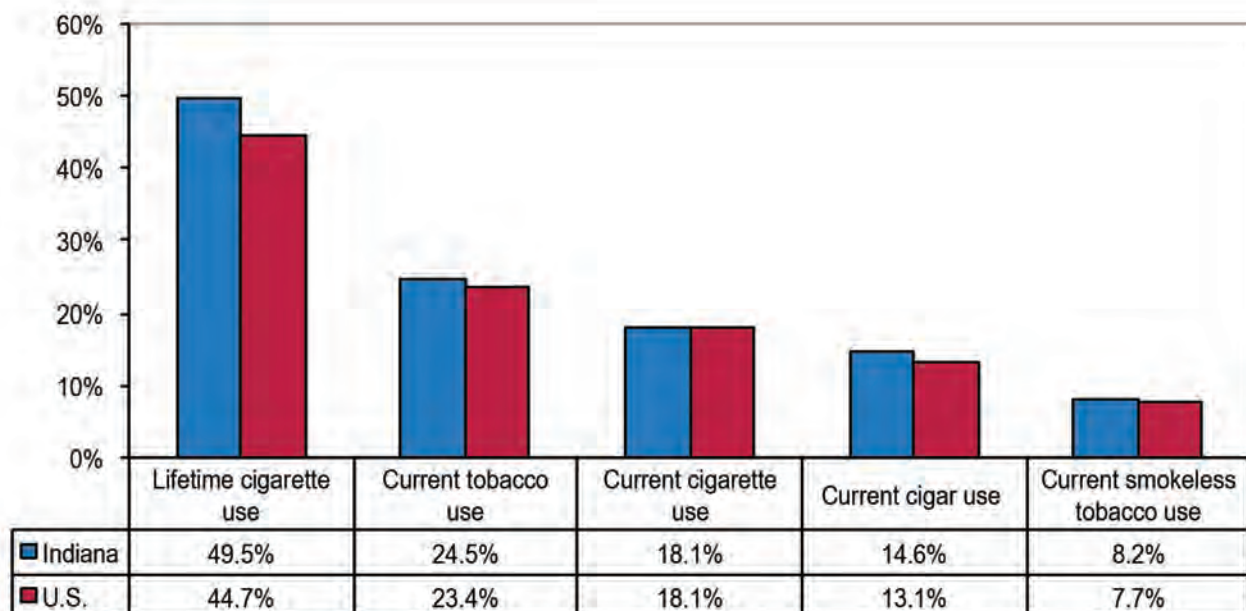
¹Twelve Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

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, 2014)

	All Students		Gender		Age		Type of Institution	
	Indiana	U.S.	Male	Female	Under 21	21 or Over	Private	Public
Cigarettes (Past-Year)	25.2	23.2	31.0	21.7‡	21.1	30.4‡	18.3	30.2‡
Cigarettes (Past-Month)	13.0	14.0	16.3	11.0‡	9.7	17.3‡	8.5	16.3‡
Cigars (Past-Year)	23.9	N/A	42.5	12.7‡	24.0	23.6	25.0	23.1
Cigars (Past-Month)	7.5	N/A	14.1	3.6‡	7.9	7.0	8.2	7.0
Chewing/ smokeless tobacco (Past-Year)	8.7	N/A	19.7	2.1‡	8.1	9.4	10.3	7.4‡
Chewing/ smokeless tobacco (Past-Month)	4.8	N/A	11.4	0.9‡	4.7	5.0	6.1	3.9‡
Smoking tobacco with hookah/water pipe (Past-Year)	28.8	26.1	34.6	25.4‡	29.6	27.9	27.1	30.1*
Smoking tobacco with hookah/water pipe (Past-Month)	10.3	N/A	13.9	8.1‡	11.2	9.0*	11.6	9.3*

Note: * $P < 0.05$; † $P < 0.01$; ‡ $P < 0.001$; Indiana data are from 2014, while U.S. data are from 2013.
Source: King & Jun, 2014

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

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).

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).

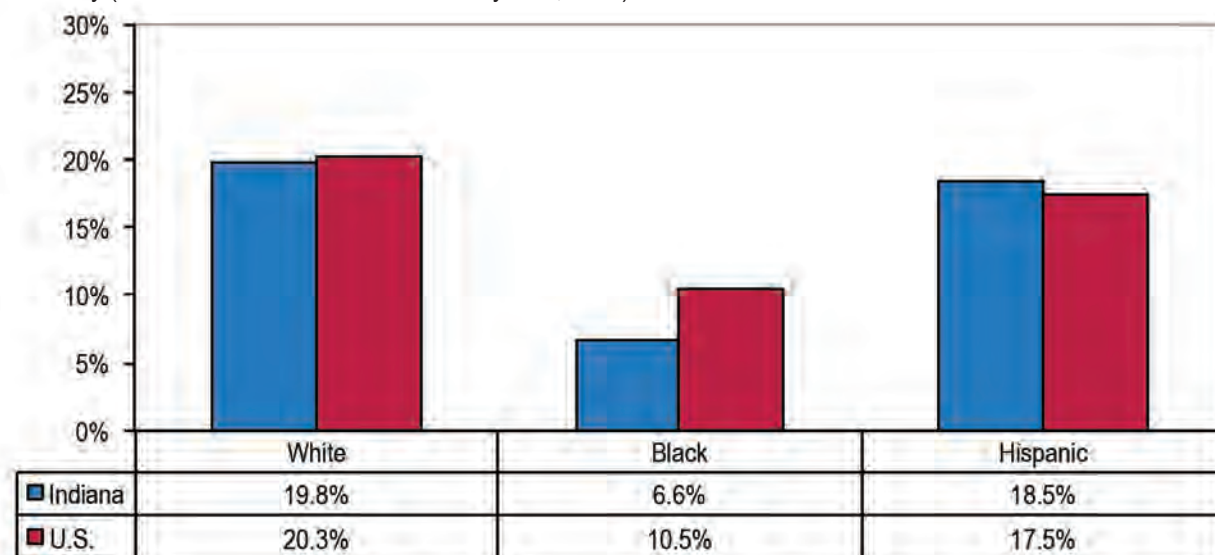
Prevalence of current cigarette use increased as students progressed through high school. In 2011, 12.6% (95% CI: 11.1–14.3) of 9th grade students reported current use; this represents a rate significantly lower than the rates for 11th and 12th grade students (11th grade: 19.0%; 95% CI: 14.4–24.7; 12th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

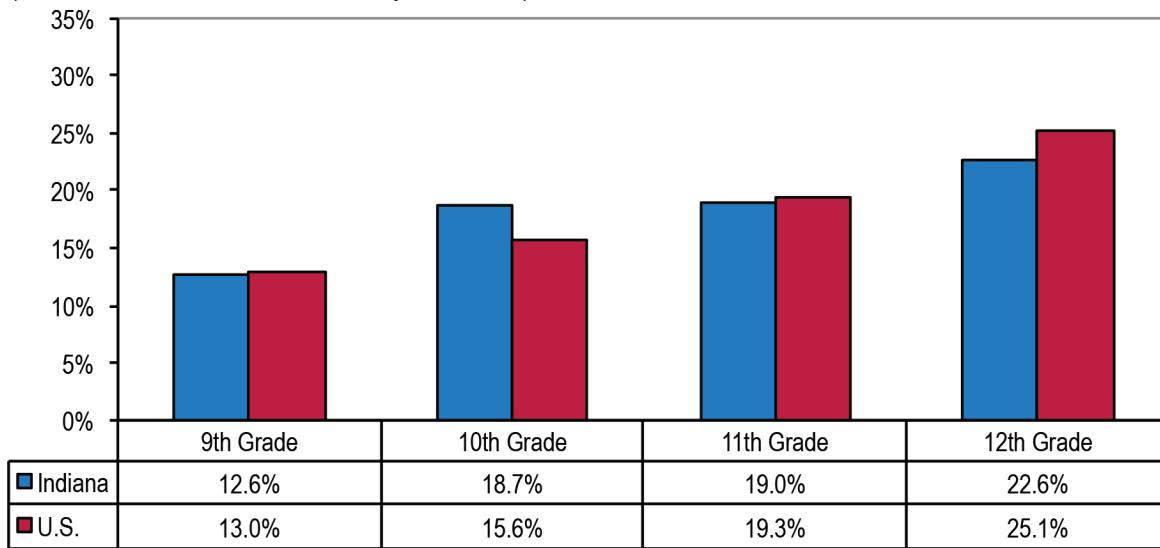
Figure 4.6 Rates of Current Cigarette Use in Indiana and U.S. High School Students (9th–12th Grade), by Race/Ethnicity (Youth Risk Behavior Surveillance System, 2011)



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)

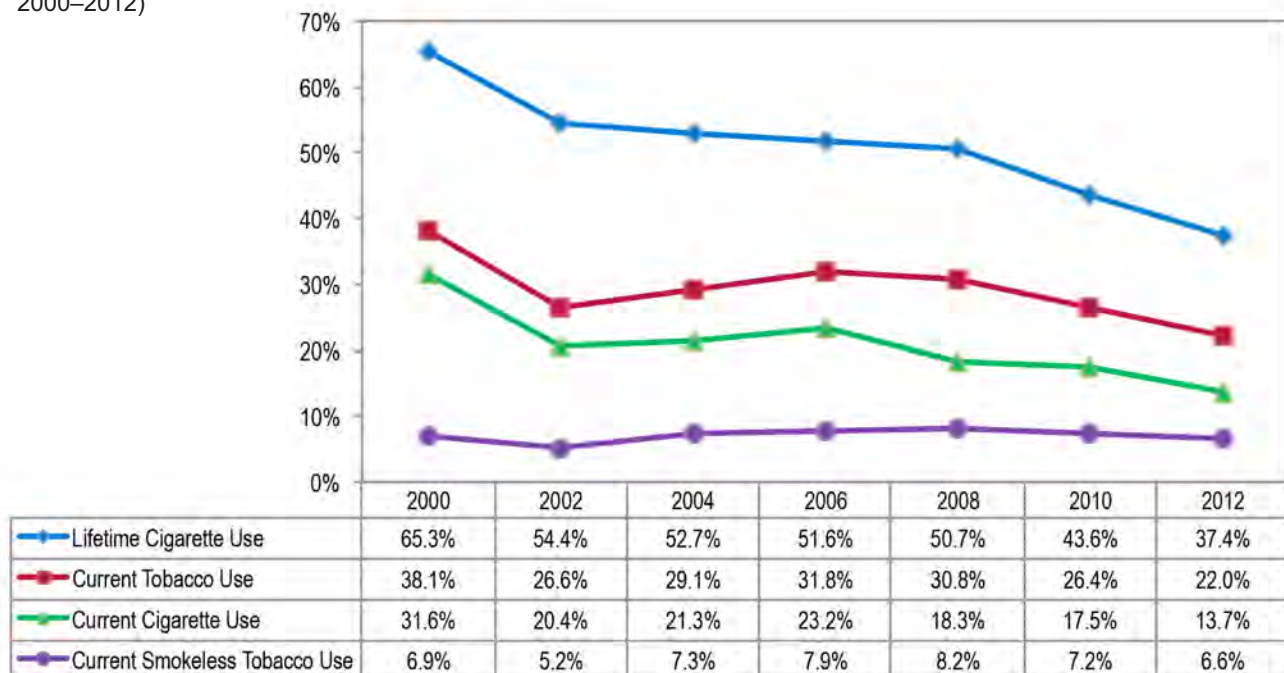


Source: Centers for Disease Control and Prevention, 1991-2011

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 67-69) 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 2014 Indiana Youth Survey (formerly known as Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents, or 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

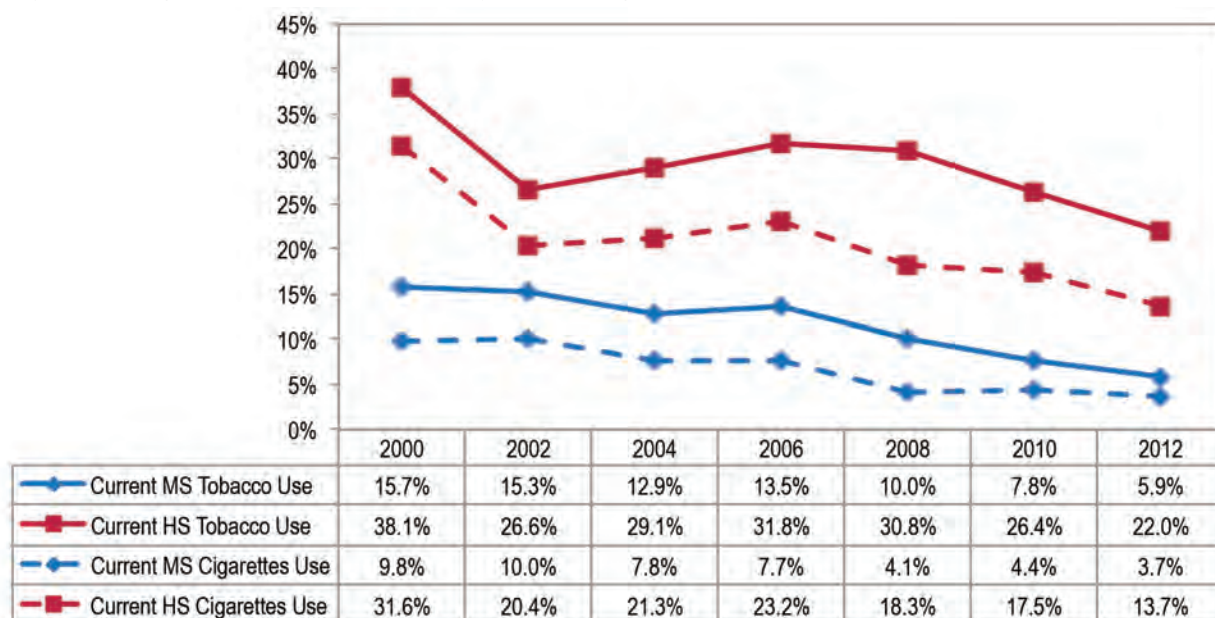
pipe use at 14.5 years (Gassman, Jun, Samuel, Agle, Lee, Crane, Boyken, et al., 2014).

Generally, tobacco use increased 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., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014). See Appendix 4B (page 70) for Indiana students' 2014 lifetime and monthly cigarette use by region and grade.

Comparisons between Indiana and the United States (Monitoring the Future, 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.

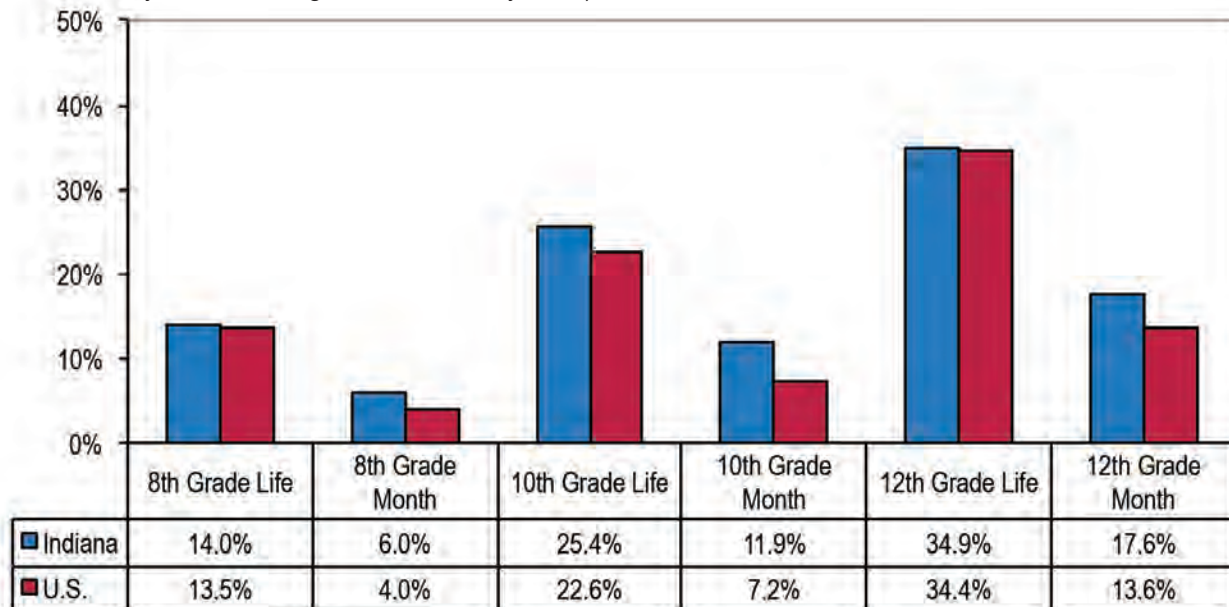
In 2012, 3.9% of middle school students and 10.6% of high school students in Indiana had used e-cigarettes in their lifetime. Among current Indiana youth cigarette smokers, 16% of middle school students and 19% of high school students reported currently using e-cigarettes (Tobacco Prevention and Cessation Commission, 2014a).

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



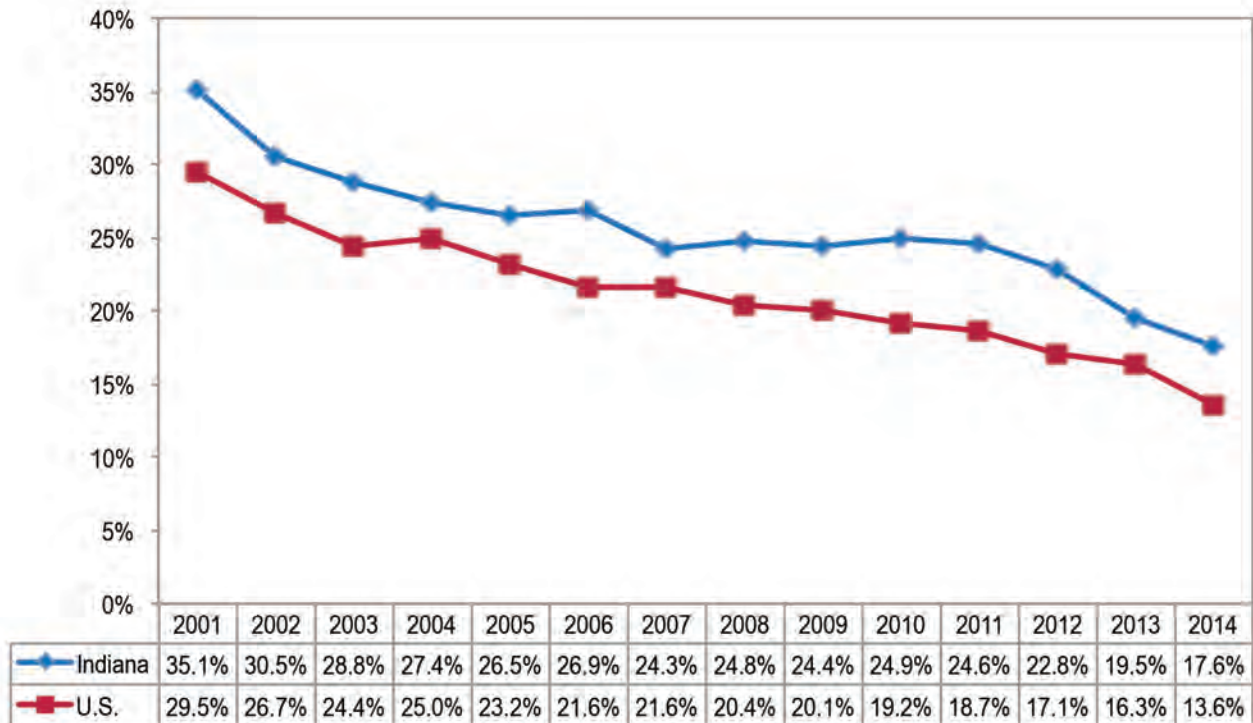
Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b

Figure 4.10 Cigarette Use Among 8th, 10th, and 12th Grade Students, Indiana and the United States (Indiana Youth Survey and Monitoring the Future Survey, 2014)



Source: Gassman et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

Figure 4.11 Past-Month Smoking Prevalence for 12th Grade Students in Indiana and the United States (Indiana Youth Survey and Monitoring the Future Survey, 2001–2014)



Source: Gassman et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

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, 2015). In the United States, cigarette smoking is the single most preventable cause of disease and death, causing more deaths each year than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires combined.

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, 2014).

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

Smoking can result in cancers of the oral cavity, pharynx, larynx, esophagus, lung, bladder, stomach, cervix, kidney, and pancreas, as well as acute myeloid leukemia. Furthermore, the Surgeon General Report (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, 2014). 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, 2014). The percentage of births to mothers who smoked during pregnancy declined in Indiana from 21.3% in 1997 to 16.5% in 2012; a higher percentage of white mothers (18.1%) smoked during pregnancy than black mothers (13.0%) (Indiana State Department of Health, Epidemiology Resource Center, 2014). For a list of health outcomes/diseases for which maternal smoking is a significant risk factor in Indiana, see Appendix 4C, page 70.

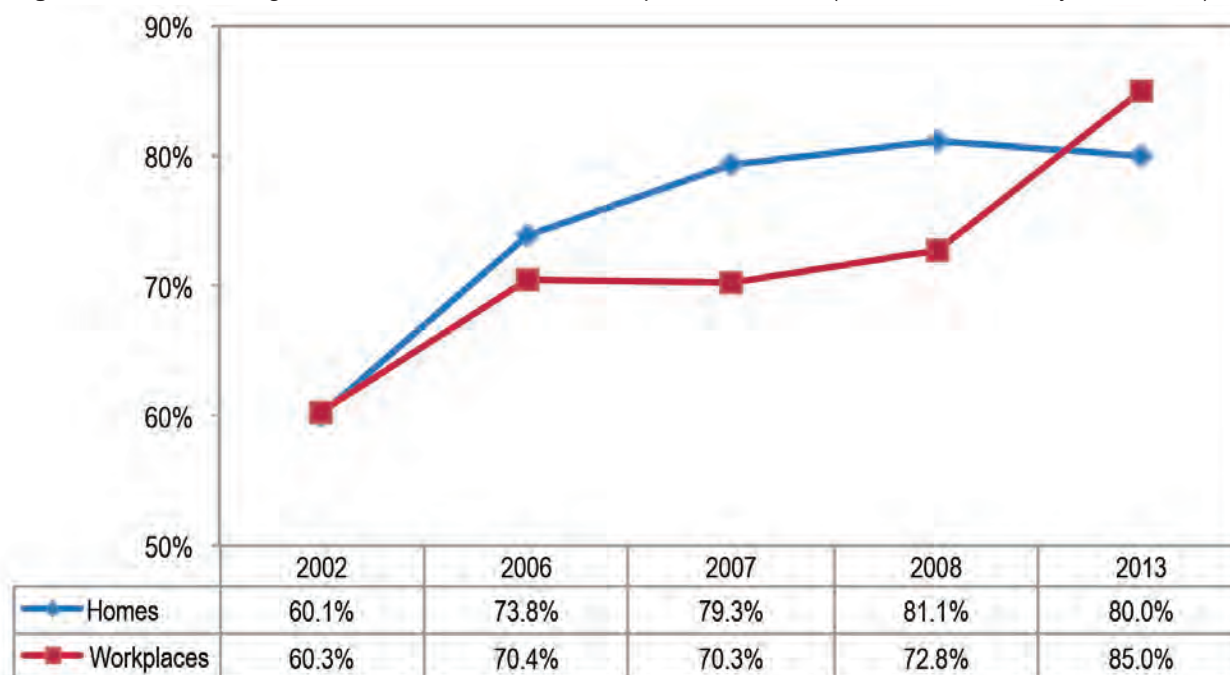
The health effects of exposure to aerosol from e-cigarettes are currently unknown; however, research shows that the aerosol releases measurable amounts of carcinogens and other toxins into the air, including nicotine, formaldehyde and acetaldehyde. In addition, research has demonstrated that e-cigarette aerosol has a high concentration of ultrafine particles. Exposure to fine and ultrafine particles may exacerbate respiratory conditions and constrict arteries (Tobacco Prevention and Cessation Commission, 2014a).

The use of tobacco products has wide-ranging consequences for adolescents and young adults. Factors associated with youth tobacco use include low socioeconomic status; use and approval of tobacco use by peers or siblings; smoking by parents or guardians; accessibility, availability and price of tobacco products; a perception that tobacco use is normative; lack of parental support or involvement; low levels of academic achievement; lack of skills to resist influences to tobacco use; lower self-image or self-esteem; belief in functional benefits of tobacco use; and lack of self-efficacy to refuse offers of tobacco (Centers for Disease Control and Prevention, 2014).

According to the 2014 Surgeon General's Report, an estimated 11,100 Hoosiers die annually from smoking-attributable causes (U.S. Department of Health and Human Services, 2014). Indiana's age-adjusted mortality rate was 308.9 per 100,000 population (95% CI: 302.8–315.0), a rate significantly higher than the U.S. median of 263.3 per 100,000 population (Centers for Disease Control and Prevention, n.d.). For a detailed list of smoking-attributable mortality rates by disease category, see Appendix 4D, page 71.

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 72-75.

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



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 34,000 deaths due to heart disease and 7,300 lung cancer deaths each year among nonsmoking adults (Centers for Disease Control and Prevention, 2014). 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 workplaces² rose from 60.3% to 85.0% during that time period (see Figure 4.12). Indiana is making progress but is lagging behind the rest of the nation in terms of comprehensive coverage from secondhand smoke exposure in workplaces. Currently, there are 40 (including the Indianapolis International Airport) ordinances, of which 35 meet the Surgeon General's guidelines for clean indoor air laws; 18 of these laws are comprehensive. With the addition of the statewide smoke-free air law in 2012, 100% of the population is covered by some type of smoke-free air law. Eighteen communities³ in Indiana have passed comprehensive smoke-free air ordinances which cover all work places, including bars, ensuring all workers are protected from secondhand smoke. These eighteen comprehensive ordinances cover approximately 28% of all residents in Indiana. (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2015).

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

³These include Delaware Co., Hancock Co., Monroe Co., Vanderburgh Co., Vigo Co., Bloomington, Columbus, Cumberland, Elkhart, Fort Wayne, Franklin, Greencastle, Indianapolis, Lawrence, Plainfield, Terre Haute, West Lafayette, and Zionsville

Economic Consequences

Annual U.S. tobacco industry marketing expenditures were estimated at \$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, 2013).

The federal excise tax, as of January 1, 2015, is \$1.01 per pack of cigarettes. The average state cigarette excise tax rate is \$1.54 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, 2015).

During 2009–2012, cigarette smoking was estimated to be responsible for \$ 289 billion in annual health-related economic losses in the United States (\$133

billion in direct medical costs and approximately \$156 billion in lost productivity) (Centers for Disease Control and Prevention, 2014). 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, 2013b

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, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	4.7	3.9*	5.7*	3.4	6.3*	5.2	4.9	3.4*	6.1*
	Monthly	1.7	1.7	2.1	1.1	2.4	1.7	2.3	1.2	1.9
7th Grade	Lifetime	8.3	8.9	8.5	9.4	8.8	6.5*	9.8	7.9	10.4*
	Monthly	3.3	3.5	3.1	3.2	3.3	2.7*	3.4	3.4	4.5*
8th Grade	Lifetime	14.0	12.3*	15.4*	11.2	14.0	12.9	18.1*	13.1	17.8*
	Monthly	6.0	5.4	5.6	4.6	5.7	5.0*	8.3*	6.6	8.1*
9th Grade	Lifetime	19.2	19.0	18.8	18.5	19.4	16.4*	22.0*	18.1	24.7*
	Monthly	9.3	8.5	8.7	7.3	9.5	7.9*	11.6*	8.5	13.5*
10th Grade	Lifetime	25.4	25.1	24.3	23.1	28.7*	19.3*	28.7*	25.2	31.8*
	Monthly	11.9	10.5*	10.2*	12.8	13.5	8.4*	14.9*	12.4	16.4*
11th Grade	Lifetime	30.2	31.0	29.6	27.4	29.1	25.8*	29.4	29.6	36.9*
	Monthly	15.0	14.1	14.7	11.7	13.8	12.5*	13.8	14.8	20.7*
12th Grade	Lifetime	34.9	35.8	31.9*	34.5	35.8	28.8*	38.2	35.5	40.3*
	Monthly	17.6	15.9*	14.8*	18.5	19.3	13.8*	21.2*	19.1	22.0*

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

Source: Gassman, et al., 2014

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 - Part 1

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

County	Estimated Number of Adult Smokers	Estimated Adult Smoking Rate	Asthma ER Visits Age-Adjusted Rate per 10,000	Lung Cancer Average Mortality Rate per 100,000	COPD Average Age-adjusted Mortality Rate per 100,000	Major CVD Average Age-adjusted Mortality Rate per 100,000
Adams	4,924	20.8%	38.3	43.2	28.7	242.5
Allen	54,468	21.0%	54.4	49.5	49.0	235.6
Bartholomew	11,142	19.4%	7.0	59.5	56.3	261.1
Benton	1,853	28.2%	30.4	80.1	72.4	275.7
Blackford	2,896	29.4%	63.2	62.9	46.6	269.9
Boone	6,964	17.1%	27.6	57.6	39.9	285.8
Brown	2,438	20.2%	*	53.5	44.4	180.9
Carroll	3,921	25.8%	23.2	59.8	59.5	222.2
Cass	6,641	23.0%	30.9	67.5	54.8	261.9
Clark	21,704	25.8%	42.9	73.3	61.8	306.8
Clay	4,683	22.9%	40.6	56.6	62.1	327.3
Clinton	4,607	18.9%	48.0	62.3	54.3	288.9
Crawford	2,079	25.3%	26.8	64.2	57.7	327.6
Daviess	5,317	23.6%	24.1	51.5	44.4	283.6
Dearborn	9,345	24.9%	23.5	63.9	52.0	246.9
Decatur	4,066	21.2%	43.9	72.1	46.9	264.1
DeKalb	6,932	22.3%	24.2	51.7	59.1	256.7
Delaware	23,713	25.2%	47.3	71.7	58.4	272.2
Dubois	5,713	18.3%	22.4	38.7	29.2	262.8
Elkhart	28,418	20.1%	36.7	52.1	43.5	263.6
Fayette	4,578	24.8%	40.1	73.7	70.9	299.6
Floyd	15,918	28.1%	35.2	69.2	59.7	278.7
Fountain	3,567	27.3%	114.4	74.3	57.6	290.4
Franklin	5,406	31.7%	16.5	53.4	41.4	218.3
Fulton	2,758	17.6%	42.2	65.0	61.1	313.6
Gibson	6,517	25.7%	41.8	52.4	45.3	254.0
Grant	15,754	28.7%	98.9	66.7	79.4	258.7
Greene	6,118	24.2%	24.8	69.1	58.4	324.4
Hamilton	23,762	12.4%	21.3	39.0	35.9	207.6
Hancock	10,539	20.4%	27.0	61.2	51.1	250.6
Harrison	4,028	13.4%	26.6	59.4	65.4	238.8
Hendricks	19,103	18.1%	18.6	50.6	54.9	256.7
Henry	10,872	28.3%	65.1	69.3	61.3	269.4
Howard	15,160	24.0%	50.6	61.5	51.2	254.0
Huntington	7,281	25.7%	51.2	47.6	58.0	250.6
Jackson	7,415	23.2%	41.2	67.3	61.3	287.2
Jasper	6,744	27.1%	20.0	79.0	38.4	278.4
Jay	3,996	25.6%	60.3	74.9	60.1	256.4
Jefferson	7,302	29.1%	24.1	69.9	66.2	329.3
Jennings	6,949	33.1%	28.6	77.7	95.6	266.7
Johnson	24,764	24.1%	37.7	56.8	71.2	280.4
Knox	9,165	30.3%	48.6	54.3	60.8	364.0
Kosciusko	12,601	21.9%	34.4	55.9	41.4	251.8
LaGrange	4,694	19.3%	29.2	40.2	40.0	246.9
Lake	88,496	24.0%	63.5	57.8	39.4	294.8
LaPorte	22,899	26.6%	49.2	54.8	50.4	303.5
Lawrence	7,088	20.1%	48.1	66.4	47.5	297.9
Madison	28,248	27.9%	86.7	62.6	50.0	266.3
Marion	163,807	24.2%	75.5	66.9	61.8	285.6

(Continued on next page)

APPENDIX 4E - Part 1

(Continued from previous page)

County	Estimated Number of Adult Smokers	Estimated Adult Smoking Rate	Asthma ER Visits Age-Adjusted Rate per 10,000	Lung Cancer Average Mortality Rate per 100,000	COPD Average Age-adjusted Mortality Rate per 100,000	Major CVD Average Age-adjusted Mortality Rate per 100,000
Marshall	7,224	21.0%	35.1	45.7	58.2	264.9
Martin	1,374	17.5%	28.3	58.4	46.5	319.9
Miami	8,867	31.1%	53.6	67.1	39.4	275.6
Monroe	20,560	17.8%	21.4	49.2	34.4	193.1
Montgomery	6,725	23.2%	45.8	64.9	44.0	279.9
Morgan	12,479	24.2%	60.7	68.1	80.9	312.3
Newton	4,572	41.7%	*	64.6	54.9	278.6
Noble	9,261	26.7%	35.6	61.8	56.7	267.5
Ohio	1,371	28.4%	*	75.1	*	313.1
Orange	4,217	28.2%	36.0	81.0	57.9	295.1
Owen	5,300	32.0%	39.4	82.3	68.0	307.1
Parke	4,088	30.0%	37.1	73.6	53.9	282.0
Perry	3,723	24.5%	95.2	68.2	45.7	233.4
Pike	1,834	18.4%	27.9	57.1	54.0	325.6
Porter	26,626	21.4%	30.6	54.3	41.8	250.0
Posey	4,251	21.5%	16.9	47.6	60.1	238.1
Pulaski	2,286	22.4%	41.7	58.2	50.4	313.2
Putnam	7,312	24.4%	33.1	76.0	46.9	238.0
Randolph	4,650	23.5%	66.2	64.2	42.7	248.2
Ripley	5,625	26.5%	31.8	63.0	55.6	255.0
Rush	2,866	21.9%	61.9	65.8	71.7	287.6
Saint Joseph	41,825	20.8%	41.1	55.5	43.6	263.7
Scott	4,519	24.6%	32.5	80.6	83.0	265.2
Shelby	9,070	27.0%	46.2	62.8	51.1	275.6
Spencer	3,178	20.0%	31.7	53.0	35.8	255.0
Starke	5,759	32.6%	57.2	77.1	65.4	364.1
Steuben	5,718	21.7%	31.6	38.3	53.3	259.8
Sullivan	4,221	25.0%	29.6	58.3	59.8	351.7
Switzerland	2,304	29.2%	*	75.4	*	291.4
Tippecanoe	20,148	14.7%	43.5	56.6	52.6	243.4
Tipton	3,107	25.4%	61.8	46.5	45.4	249.9
Union	1,678	29.8%	*	57.1	*	242.7
Vanderburgh	35,092	25.1%	55.5	65.5	56.3	252.9
Vermillion	3,080	24.7%	57.8	67.3	58.5	396.9
Vigo	19,843	23.4%	42.2	70.0	64.2	299.8
Wabash	4,908	19.3%	37.9	49.3	51.6	245.6
Warren	1,257	19.3%	80.7	52.2	59.7	225.8
Warrick	6,063	13.7%	43.5	56.5	50.9	253.4
Washington	7,841	37.1%	*	73.9	68.3	281.7
Wayne	13,789	26.0%	39.3	74.8	52.9	287.1
Wells	4,251	20.5%	28.4	46.2	61.6	211.8
White	4,054	21.7%	48.9	76.8	47.5	213.4
Whitley	5,398	21.5%	26.8	53.9	58.0	221.4
Indiana	1,067,735	21.9%	46.8	60	52.4	268.7

Notes: Estimated number of adult smokers and smoking rate are based on findings from the 2013 BRFSS and 2014 County Health Rankings; rate for Asthma-related emergency room (ER) visits is based on 2011 data; lung cancer mortality rate is based on pooled averages from 2003-2007; COPD mortality rate is based on pooled averages from 2006-2010; and major cardiovascular disease (CVD) mortality rate is based on pooled averages from 2006-2010.

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

APPENDIX 4E - Part 2

County	Percent of Pregnant Women who Smoke	Estimated cost of smoking-affected births	Number of people living with tobacco-related illnesses	Annual deaths due to tobacco	Annual deaths due to Secondhand Smoke (SHS)	Economic burden of SHS
Adams	8.6	\$60,838	1617	54	8	\$6,911,787
Allen	8.8	\$834,310	17715	591	78	\$71,421,129
Bartholomew	17.6	\$201,674	3923	131	17	\$15,435,594
Benton	17.6	\$23,024	449	15	2	\$1,779,654
Blackford	31.5	\$53,043	673	22	3	\$2,565,966
Boone	10.5	\$115,669	2781	93	13	\$11,384,640
Brown	21.4	\$37,986	824	27	3	\$3,063,642
Carroll	23.5	\$74,674	1038	35	4	\$4,051,155
Cass	19.7	\$131,924	1972	66	9	\$7,832,166
Clark	15.3	\$333,465	5746	192	24	\$22,156,632
Clay	23.9	\$120,808	1397	47	6	\$5,404,890
Clinton	18.8	\$138,398	1665	55	7	\$6,678,024
Crawford	32.4	\$43,510	561	19	2	\$2,153,313
Daviess	13.3	\$90,647	1539	51	7	\$6,361,248
Dearborn	21.9	\$156,184	2563	85	11	\$10,059,447
Decatur	28.4	\$95,137	1310	44	6	\$5,173,740
DeKalb	22.4	\$134,361	2123	71	9	\$8,486,823
Delaware	24.5	\$394,261	6427	214	26	\$23,651,871
Dubois	13.1	\$93,822	2132	71	9	\$8,419,689
Elkhart	12.8	\$558,790	9657	322	43	\$39,709,359
Fayette	28.7	\$82,721	1261	42	5	\$4,879,677
Floyd	13.5	\$141,402	3869	129	16	\$14,990,178
Fountain	28.8	\$56,955	892	30	4	\$3,465,240
Franklin	21.4	\$85,550	1165	39	5	\$4,640,487
Fulton	24.9	\$100,324	1070	36	5	\$4,188,036
Gibson	24.1	\$116,826	1732	58	7	\$6,734,103
Grant	26.1	\$309,996	3749	125	15	\$14,082,261
Greene	22.5	\$130,390	1727	58	7	\$6,666,165
Hamilton	3.0	\$195,377	13089	436	60	\$55,188,369
Hancock	11.5	\$124,717	3529	118	15	\$14,070,402
Harrison	20.5	\$111,220	2053	68	9	\$7,912,164
Hendricks	8.4	\$226,722	7208	240	32	\$29,235,048
Henry	26.1	\$193,922	2624	87	11	\$9,941,862
Howard	22.6	\$288,980	4314	144	18	\$16,633,152
Huntington	24.3	\$127,598	1935	64	8	\$7,461,924
Jackson	21.8	\$186,053	2183	73	9	\$8,517,576
Jasper	24.0	\$107,285	1700	57	7	\$6,729,078
Jay	21.3	\$85,619	1066	36	5	\$4,271,853
Jefferson	25.4	\$122,360	1714	57	7	\$6,518,028
Jennings	28.2	\$129,199	1434	48	6	\$5,733,525
Johnson	16.4	\$433,984	7018	234	31	\$28,070,454
Knox	27.3	\$210,538	2066	69	9	\$7,726,440
Kosciusko	15.7	\$230,568	3930	131	17	\$15,548,958
LaGrange	5.5	\$83,859	1661	55	8	\$7,462,728
Lake	10.9	\$870,528	25185	839	109	\$99,697,005
LaPorte	25.4	\$541,380	5880	196	25	\$22,404,867
Lawrence	27.5	\$200,824	2408	80	10	\$9,272,934
Madison	22.3	\$488,073	6915	231	29	\$26,458,836
Marion	12.6	\$2,812,513	46232	1541	199	\$181,581,993

APPENDIX 4E - Part 2

(Continued from previous page)

County	Percent of Pregnant Women who Smoke	Estimated cost of smoking-affected births	Number of people living with tobacco-related illnesses	Annual deaths due to tobacco	Annual deaths due to Secondhand Smoke (SHS)	Economic burden of SHS
Marshall	18.4	\$167,338	2350	78	10	\$9,457,251
Martin	15.5	\$42,125	536	18	2	\$2,077,134
Miami	24.8	\$116,658	1947	65	8	\$7,417,503
Monroe	16.8	\$284,448	7889	263	30	\$27,732,774
Montgomery	23.8	\$175,196	1980	66	8	\$7,662,924
Morgan	28.7	\$258,385	3522	117	15	\$13,847,694
Newton	25.6	\$53,043	749	25	3	\$2,863,044
Noble	19.7	\$163,137	2369	79	11	\$9,554,736
Ohio	17.6	\$16,253	330	11	1	\$1,231,728
Orange	28.4	\$81,377	1021	34	4	\$3,987,840
Owen	31.7	\$92,398	1131	38	5	\$4,336,575
Parke	14.8	\$62,332	931	31	4	\$3,485,139
Perry	28.0	\$74,693	1038	35	4	\$3,886,938
Pike	21.4	\$59,783	681	23	3	\$2,581,845
Porter	9.7	\$275,411	8498	283	36	\$33,032,943
Posey	16.7	\$85,459	1350	45	6	\$5,207,910
Pulaski	23.8	\$42,083	697	23	3	\$2,693,802
Putnam	22.7	\$84,185	2047	68	8	\$7,630,563
Randolph	22.1	\$110,120	1352	45	6	\$5,260,371
Ripley	24.1	\$118,282	1450	48	6	\$5,792,418
Rush	22.5	\$63,726	894	30	4	\$3,495,792
Saint Joseph	14.1	\$603,114	13734	458	59	\$53,653,131
Scott	32.5	\$118,255	1255	42	5	\$4,860,381
Shelby	23.4	\$160,279	2294	76	10	\$8,931,636
Spencer	22.9	\$40,835	1085	36	5	\$4,211,352
Starke	27.4	\$103,045	1207	40	5	\$4,695,963
Steuben	24.9	\$116,864	1800	60	8	\$6,871,185
Sullivan	19.2	\$75,928	1153	38	5	\$4,316,475
Switzerland	27.5	\$52,942	539	18	2	\$2,133,213
Tippecanoe	14.5	\$493,785	9361	312	38	\$34,728,780
Tipton	15.3	\$21,704	836	28	4	\$3,203,136
Union	29.9	\$20,408	385	13	2	\$1,510,716
Vanderburgh	20.7	\$639,122	9549	318	40	\$36,120,303
Vermillion	24.0	\$46,131	852	28	4	\$3,258,612
Vigo	17.6	\$379,232	5792	193	24	\$21,677,448
Wabash	24.4	\$135,974	1737	58	7	\$6,610,488
Warren	20.0	\$39,444	445	15	2	\$1,710,108
Warrick	15.8	\$129,010	3023	101	13	\$11,997,489
Washington	21.8	\$80,247	1444	48	6	\$5,680,662
Wayne	21.0	\$229,361	3622	121	15	\$13,852,317
Wells	16.5	\$88,222	1416	47	6	\$5,554,836
White	20.2	\$100,383	1276	43	5	\$4,953,243
Whitley	19.4	\$93,710	1715	57	8	\$6,691,692
Indiana	15.7	\$18,653,828	333000	11,100	1,426	\$1,303,244,202

Notes: Estimates of pregnant women who smoke are based on 2013 data; Indiana's economic burden of second-hand smoke (SHS) results annually in \$201 per capita.

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

REFERENCES, CHAPTER 4

- Campaign for Tobacco-Free Kids. (2013). *State-specific tobacco company marketing expenditures 1998 to 2011*. Retrieved from <http://www.tobaccofreekids.org/research/factsheets/pdf/0271.pdf>
- Campaign for Tobacco-Free Kids. (2015). *State cigarette excise tax rates & rankings*. Retrieved from <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>
- Centers for Disease Control and Prevention. (2004). *Smoking-attributable mortality, morbidity, and economic costs (SAMMEC)*. Retrieved from <http://apps.nccd.cdc.gov/sammec/index.asp>
- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/YouthOnline/>
- Centers for Disease Control and Prevention. (2013). *Behavioral Risk Factor Surveillance System Survey Data*. Retrieved from <http://apps.nccd.cdc.gov/brfss/>
- Centers for Disease Control and Prevention. (2014). *Smoking and tobacco use: Fact sheets*. Retrieved from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm
- Centers for Disease Control and Prevention. (n.d.). *State Tobacco Activities Tracking and Evaluation (STATE) System*. Retrieved from <http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx>
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., & Oi, S. E. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana State Department of Health, Epidemiology Resource Center. (2012). *Indiana natality report 2012 (Table 20)*. Retrieved from <http://www.in.gov/isdh/19095.htm>
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2013a). *Indiana Adult Tobacco Survey, 2013. Final report: Summary of methods and findings*. Report received on November 12, 2013, from the Indiana State Department of Health.
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2013b). *Indiana Youth Tobacco Survey, 2000-2012*. Data received on December 12, 2013, from the Indiana State Department of Health.
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2015). *The state of tobacco control*. Data received on February 19, 2015, from the Indiana State Department of Health.
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2014a). *Electronic cigarettes*. Retrieved from http://www.in.gov/isdh/tpc/files/Electronic_Cigarettes__11_10_14.pdf
- Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2014b). *Indiana adult smoking*. Retrieved from http://www.in.gov/isdh/tpc/files/IN_Adult_Smoking_June_2014.pdf
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- King, R. A., & Jun, M. K. (2014). *Results of the Indiana College Substance Use Survey-2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- Substance Abuse and Mental Health Services Administration. (2013). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh/reports>
- U.S. Department of Health and Human Services. (2014). *The Health Consequences of Smoking -- 50 years of progress: A Report of the Surgeon General*. Atlanta, GA.: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health.
- World Health Organization. (2015). *Tobacco Free Initiative (TFI): Why is tobacco a public health priority?* Retrieved from http://www.who.int/tobacco/health_priority/en/index.html

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).

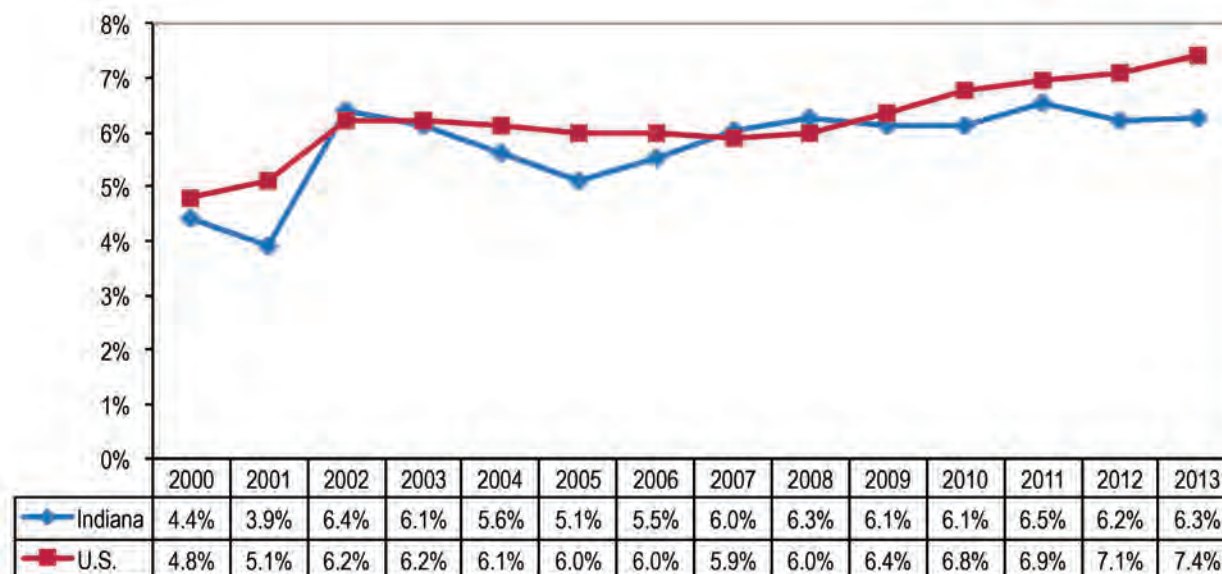
General Consumption Patterns

Marijuana is the most commonly used illicit drug, both in the United States and Indiana. According to results from

the 2012–2013 National Survey on Drug Use and Health (NSDUH), an estimated 6.3% (95% Confidence Interval [CI]: 5.2–7.6) of Indiana residents ages 12 and older reported current (past 30 days) marijuana use (U.S.: 7.4%; 95% CI: 7.2–7.6). A larger number, 11.0% (95% CI: 9.6–12.7), of Indiana residents reported past-year use of the drug (U.S.: 12.3%; 95% CI: 12.0–12.6) (Substance Abuse and Mental Health Services Administration, 2014).

Through examination of trend data from 2000 through 2013, it appears the prevalence of current marijuana use has risen from 4.4% to 6.3% 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, 2014).

Figure 5.1 Percentage of Indiana and U.S. Population (Ages 12 and Older) Reporting Current Marijuana Use (National Survey on Drug Use and Health, 2000–2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

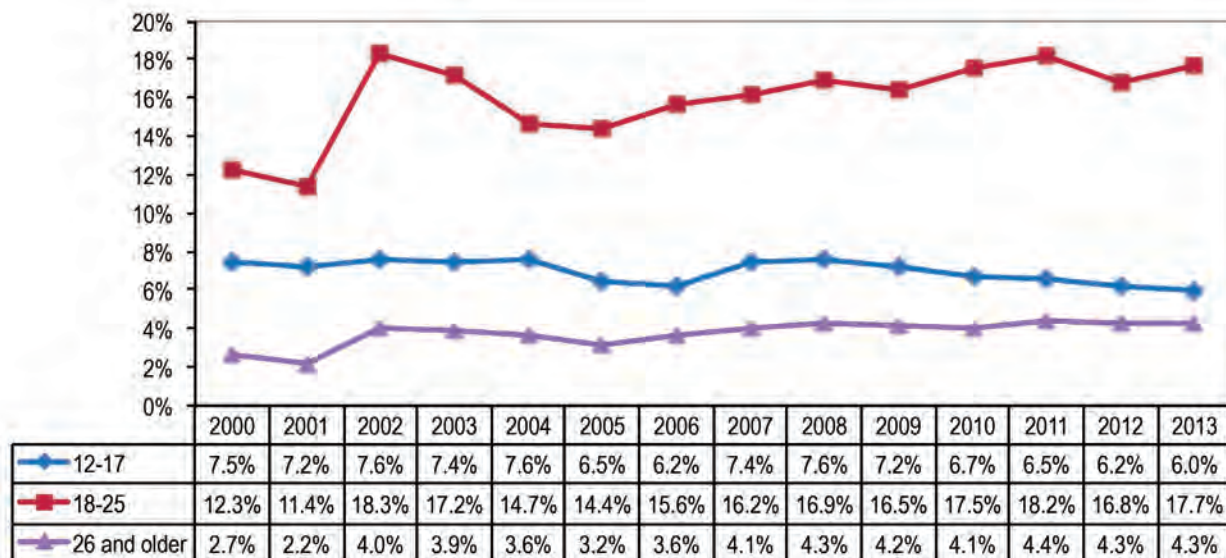
Adult Consumption Patterns

Patterns of marijuana use among adults were similar in Indiana and the United States. According to 2012–2013 NSDUH data, marijuana use was highest among individuals ages 18 to 25, with 17.7% (95% CI: 15.0–20.8) of Hoosiers in this age group reporting current use (U.S.: 18.9%; 95% CI: 18.4–19.5) and 31.6% (95% CI: 28.2–35.1) reporting past-year use (U.S.: 31.5; 95%

CI: 30.8–32.3) (Substance Abuse and Mental Health Services Administration, 2014).

Among Indiana residents ages 26 and older, 4.3% (95% CI: 3.2–5.8) reported current use (U.S.: 5.5%; 95% CI: 5.2–5.7), and 7.3% (95% CI: 5.7–9.2) reported past-year use (U.S.: 8.9%; 95% CI: 8.6–9.2) (Substance Abuse and Mental Health Services Administration, 2014). 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, 2000–2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

Regarding initiation of use in Indiana, 7.8% (95% CI: 6.4–9.5) 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, 7.5% (95% CI: 7.2–7.9) and 0.2% (95% CI: 0.2–0.3), respectively (Substance Abuse and Mental Health Services Administration, 2014).

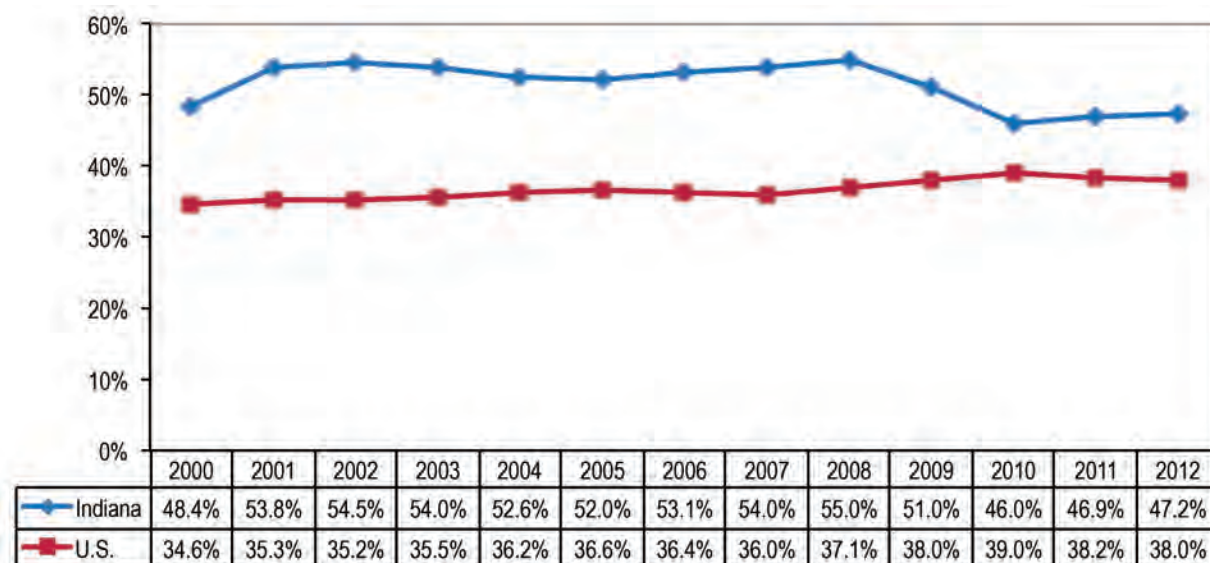
Marijuana use is also prevalent among Indiana college students. Based on results from the 2014 Indiana College Substance Use Survey, 14.1% of college students reported current marijuana use (U.S.: 20.6%) and 28.5% reported past-year use (U.S.: 35.5%).

Users were more likely to be male and attend a public institution of higher education (King & Jun, 2014).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, 2012). TEDS data from 2000 through 2012 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 2012, 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).

¹Twelve 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, 2000–2012)



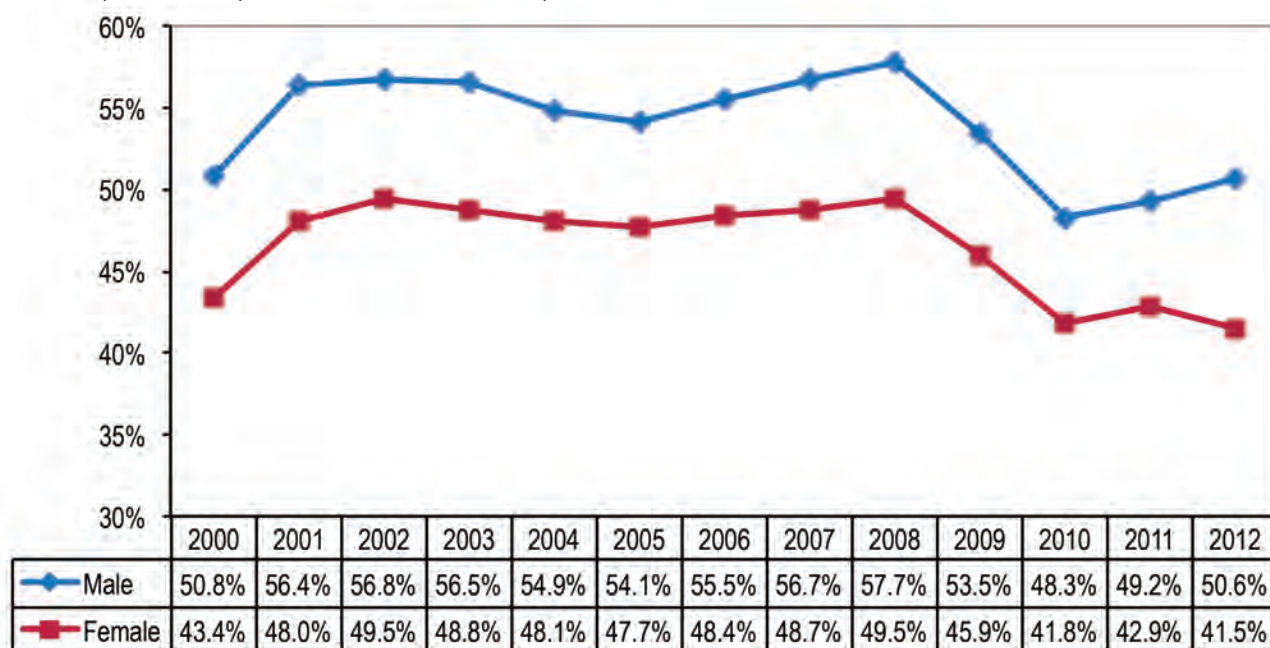
Source: Substance Abuse and Mental Health Data Archive, 2012

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 2012 (see Figure 5.5).
- Throughout the years, marijuana use in the treatment population was highest among adolescents and decreased with age. Of the Hoosiers in treatment, 75.6% who were under age of 18 reported marijuana use compared to 21.3% who were ages 55 and older (see Figure 5.6).

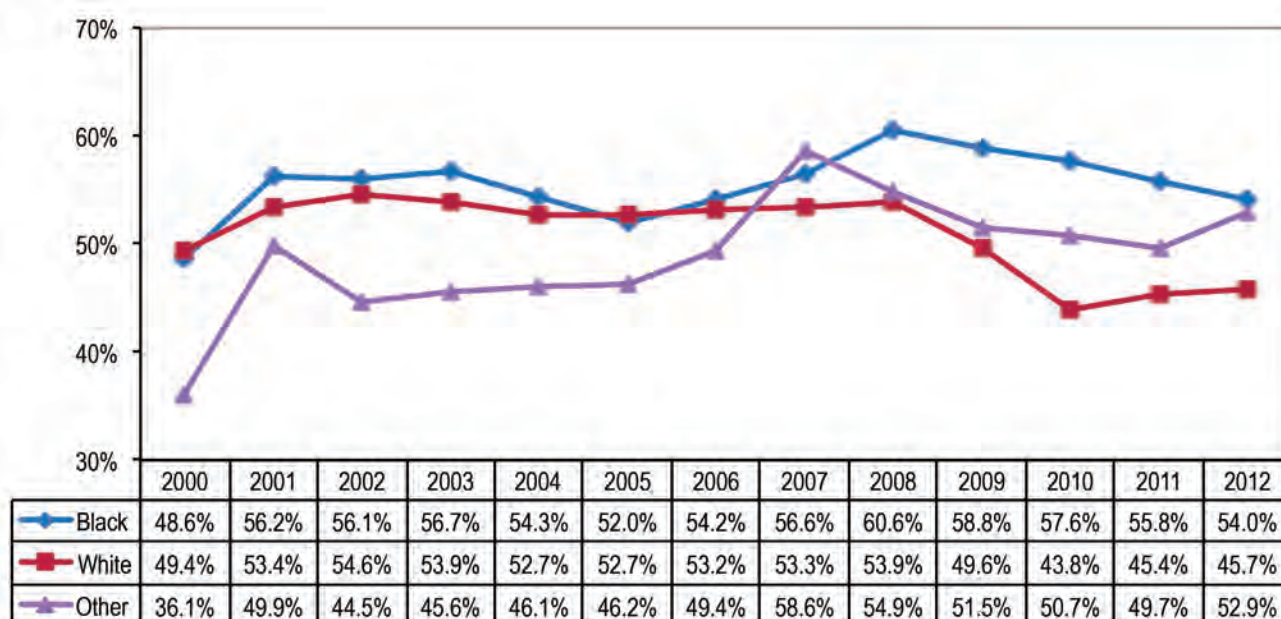
For county-level information on marijuana use, see Appendix 5A, page 90 (Indiana Family and Social Services Administration, 2015).

Figure 5.4 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2012)



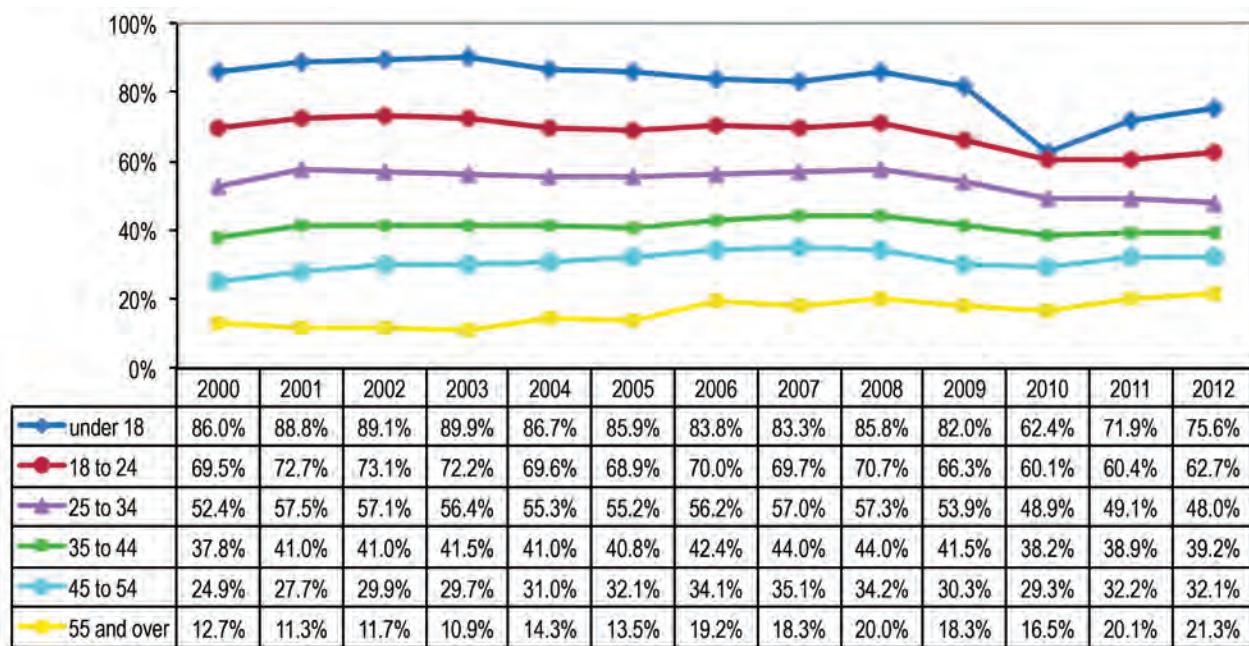
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 5.5 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 5.6 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Youth Consumption Patterns

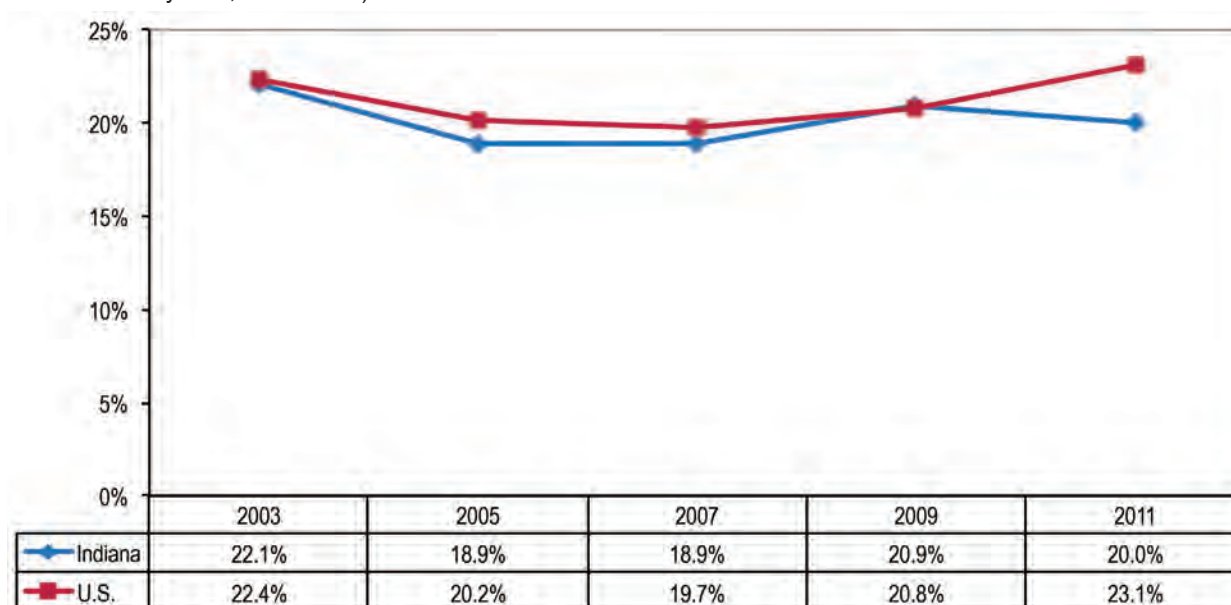
According to 2013 NSDUH findings, an estimated 5.3% (95% CI: 4.4–6.3) of 12- to 17-year-olds had used marijuana for the first time during the past year in Indiana; the rate was statistically similar to the U.S. rate of 5.8% (95% CI: 5.5–6.0). Over 12% (12.1%; 95% CI: 10.1–14.5) in that age group reported past-year marijuana use (U.S.: 13.5%; 95% CI: 13.1–13.9). Patterns of current marijuana use among Indiana youth mirrored national rates and remained constant from 2000 to 2013 (see Figure 5.2) (Substance Abuse and Mental Health Services Administration, 2014).

Based on findings from the 2011 Youth Risk Behavior Surveillance System (YRBSS), 20.0% (95% CI: 17.8–22.4) of high school students (grades 9 through 12) reported current marijuana use; this was similar to the

national rate of 23.1% (95% CI: 21.5–24.7) (Centers for Disease Control and Prevention, 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

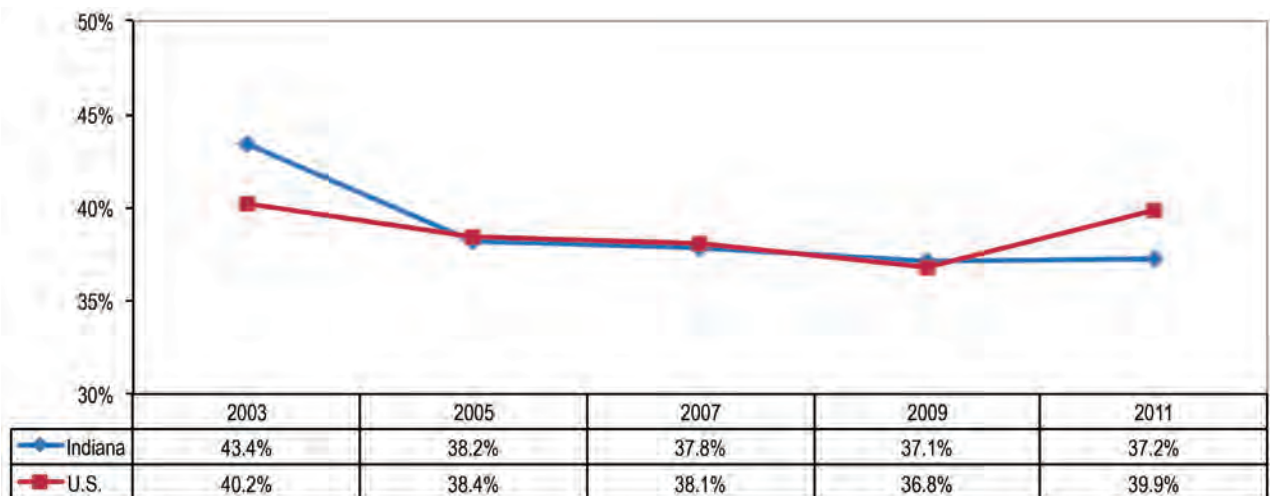
Age at drug initiation is an important risk factor in the subsequent progression to substance abuse and dependence. Researchers found that adolescents who used marijuana by the age of 17 were at greater risk to use other drugs and develop alcohol dependence and drug abuse/dependence (Lynskey, Heath,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



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)

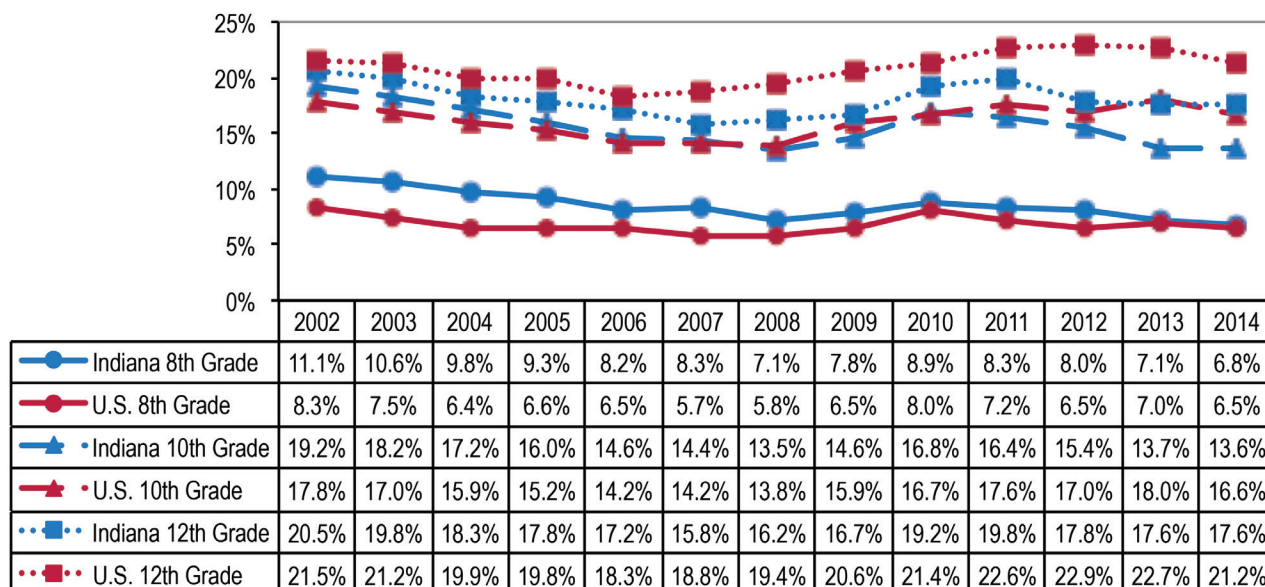
		Indiana Prevalence Rate (95% CI)	U.S. Prevalence Rate (95% CI)
Grade	9th	23.8% (19.7–28.5)	30.8% (28.0–33.7)
	10th	35.1% (30.1–40.4)	36.4% (33.4–39.5)
	11th	44.3% (36.2–52.8)	45.5% (42.1–48.9)
	12th	47.7% (41.1–54.4)	48.9% (45.7–52.1)
Gender	Male	41.0% (35.9–46.3)	42.5% (39.8–45.2)
	Female	33.3% (29.4–37.4)	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 Indiana Youth Survey (Gassman, Jun, Samuel, Agley, Lee, Boyken, et al., 2014) and the Monitoring the Future (MTF) survey (Inter-university Consortium for Political and Social Research, University of Michigan, 2014) 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 2014, see Figure 5.9.

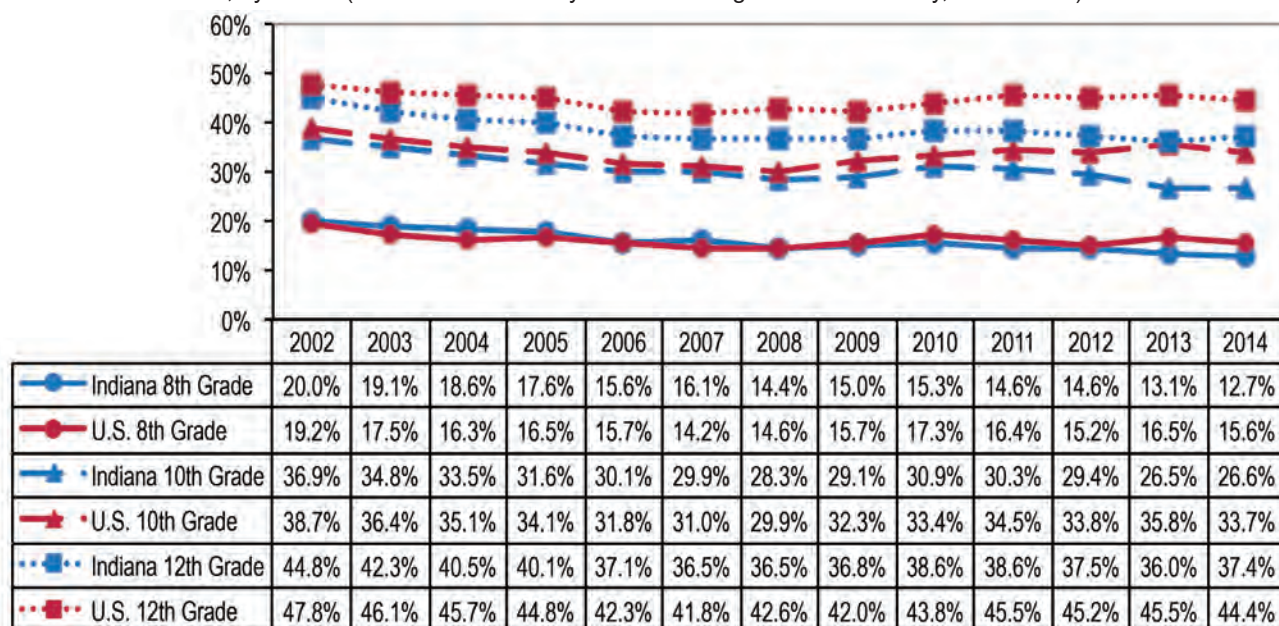
From 2002 until 2014, lifetime use among students in grades 8, 10, and 12 seemed to have declined both nationally and in Indiana (see Figure 5.10). Again, due to the data format, statistical significance of the differences could not be determined (Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014). For lifetime and monthly marijuana use by Indiana region and grade level for 2014, see Appendix 5B, page 91.

Figure 5.9 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use (Indiana Youth Survey and Monitoring the Future Survey, 2002–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

Figure 5.10 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Use of Marijuana Once or More in Their Life, by Grade (Indiana Youth Survey and Monitoring the Future Survey, 2002–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

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 an 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 dependence²

was more of a problem among the treatment population in Indiana than the treatment population in the rest of the nation. In 2012, marijuana dependence was indicated in 20.1% of Indiana's treatment episodes, which was significantly higher than the nation (17.4%) ($P < 0.001$) (see Figure 5.11) (Substance Abuse and Mental Health Data Archive, 2012).

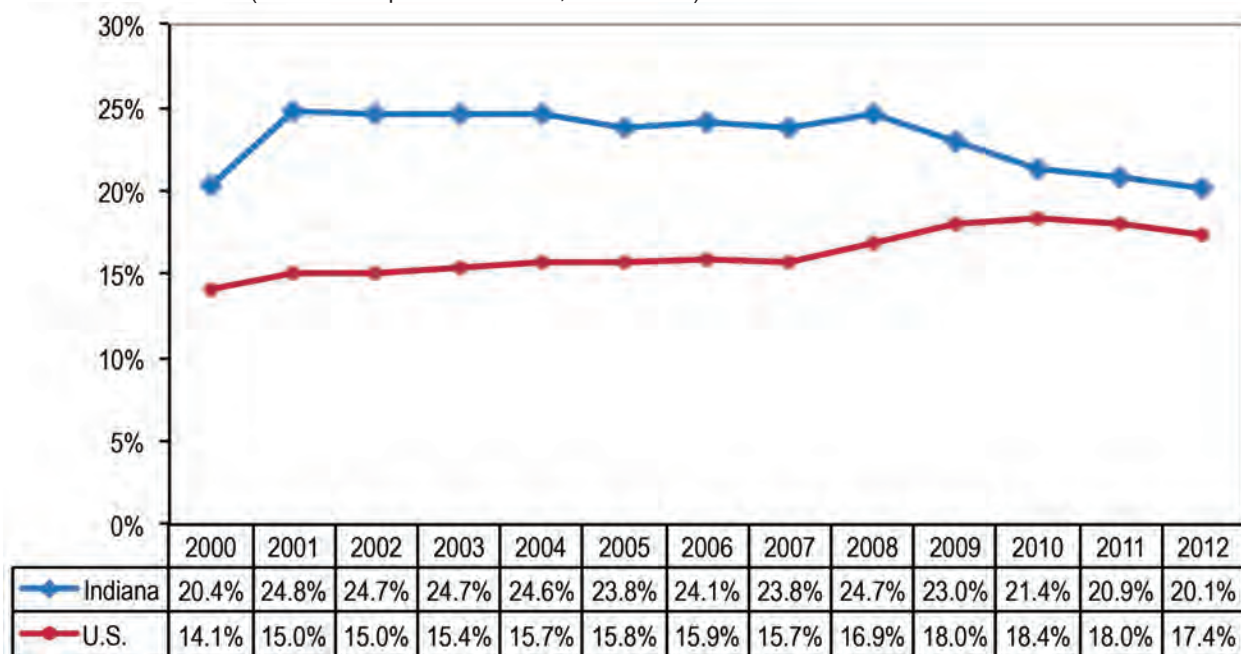
Significant differences for marijuana dependence in Indiana were observed by gender, age, and race, as follows (findings from the 2012 TEDS dataset):

- More males (22.5%) than females (16.1%) reported marijuana dependency ($P < 0.001$) (see Figure 5.12).
- More blacks (29.8%) reported marijuana dependency than whites (18.1%) or persons from other races (24.6%) ($P < 0.001$) (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, 2012).

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

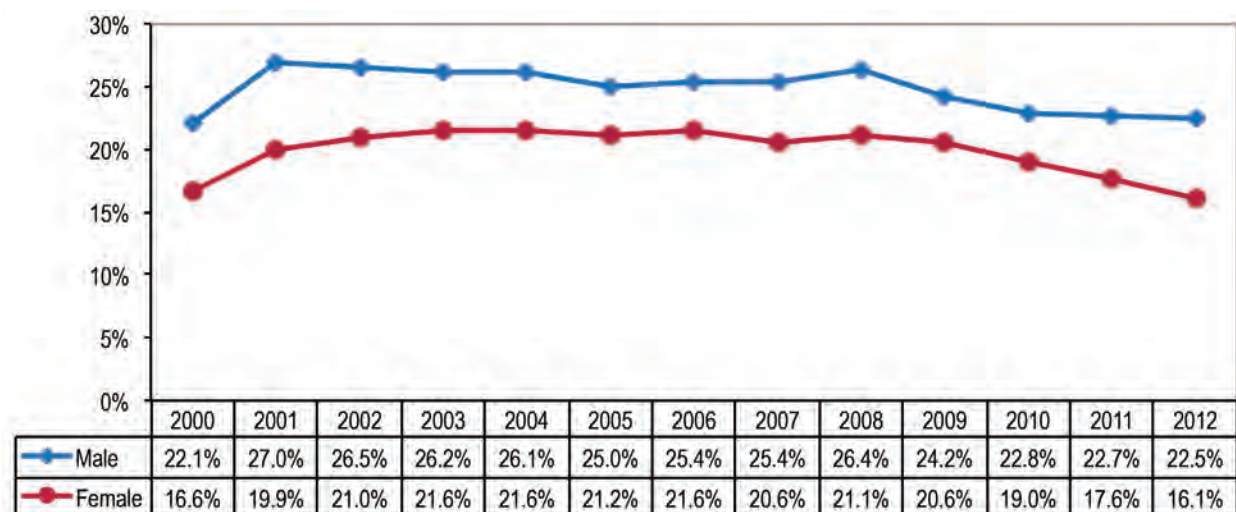
²We defined marijuana dependence as "individuals in substance abuse treatment listing marijuana as their primary substance at admission."

Figure 5.11 Percentage of Indiana and U.S. Treatment Episodes with Marijuana Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2012)



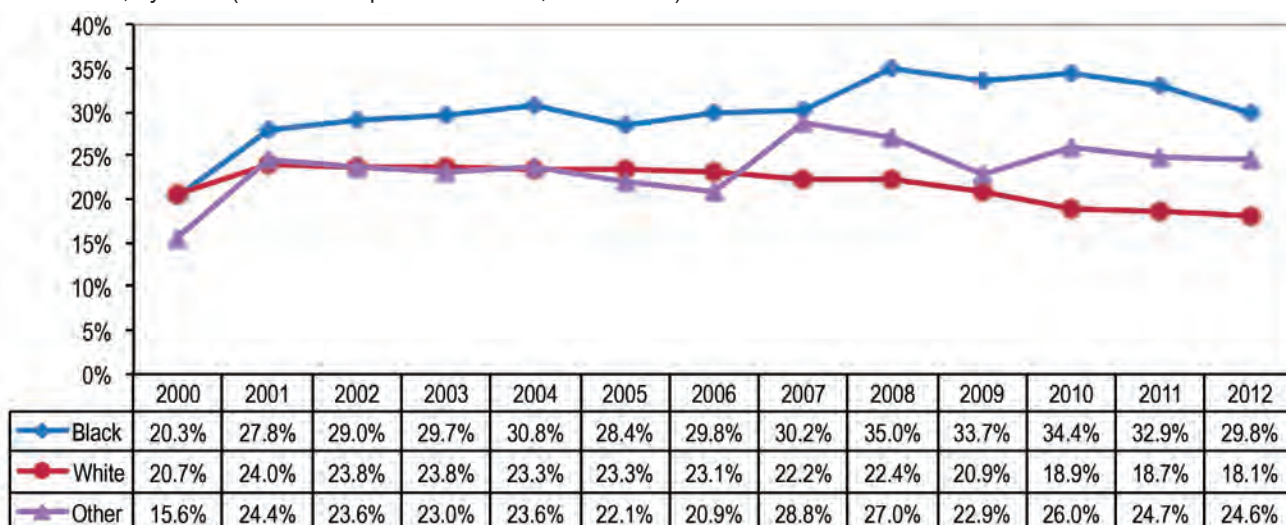
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 5.12 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2012)



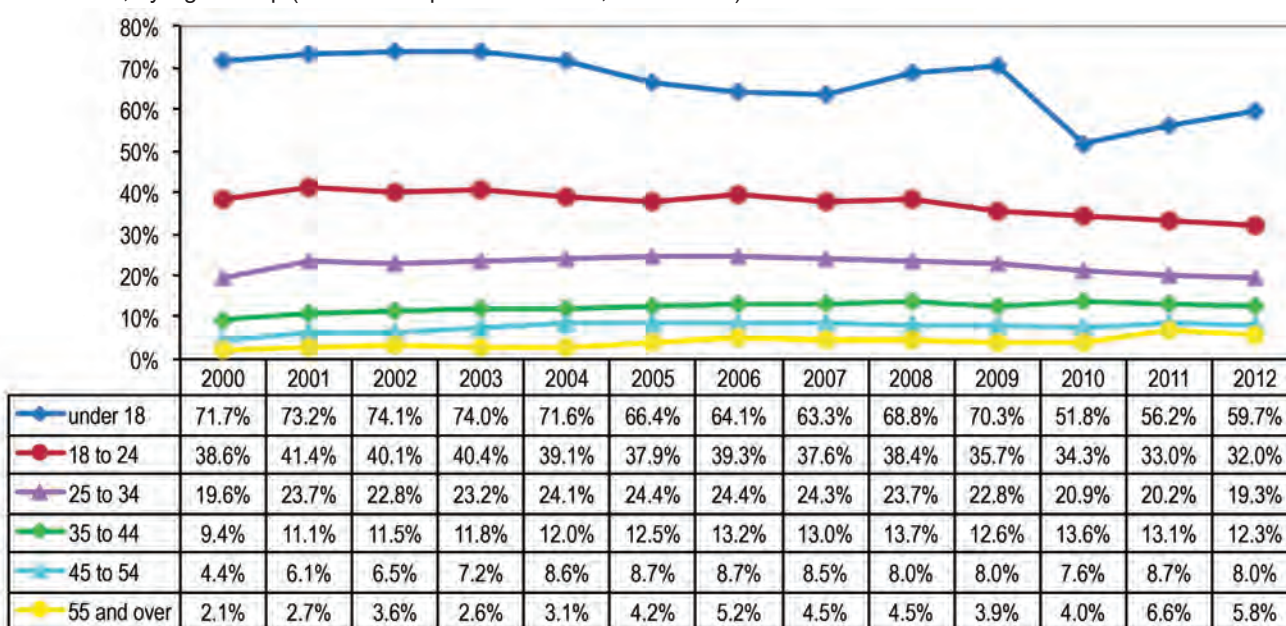
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 5.13 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 5.14 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2000–2012)



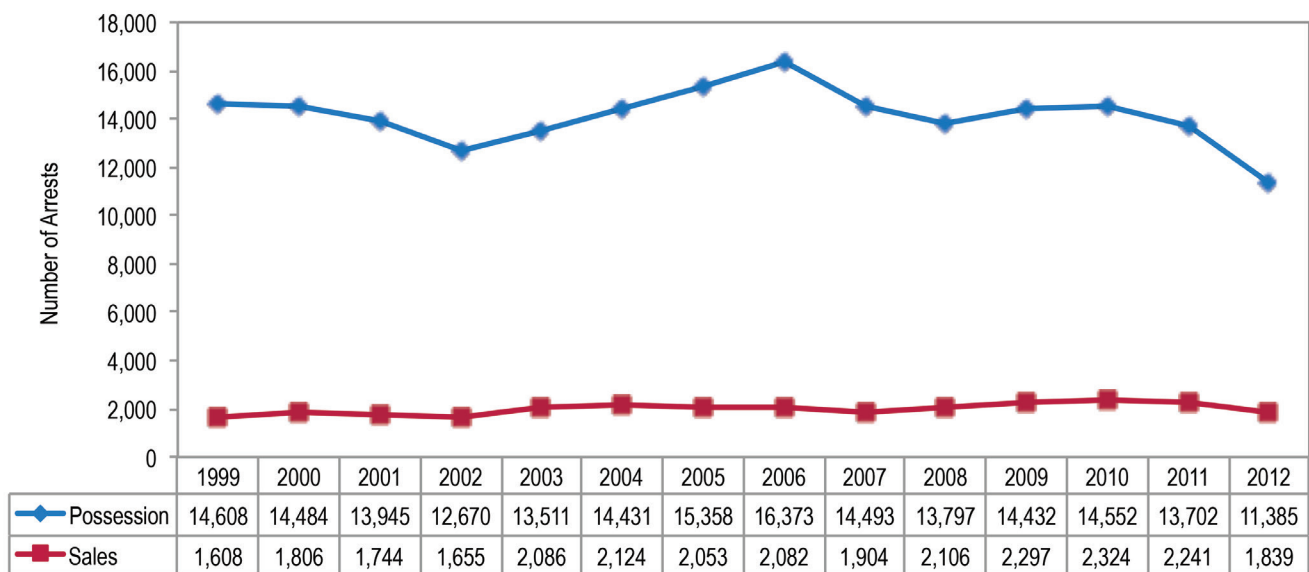
Source: Substance Abuse and Mental Health Data Archive, 2012

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

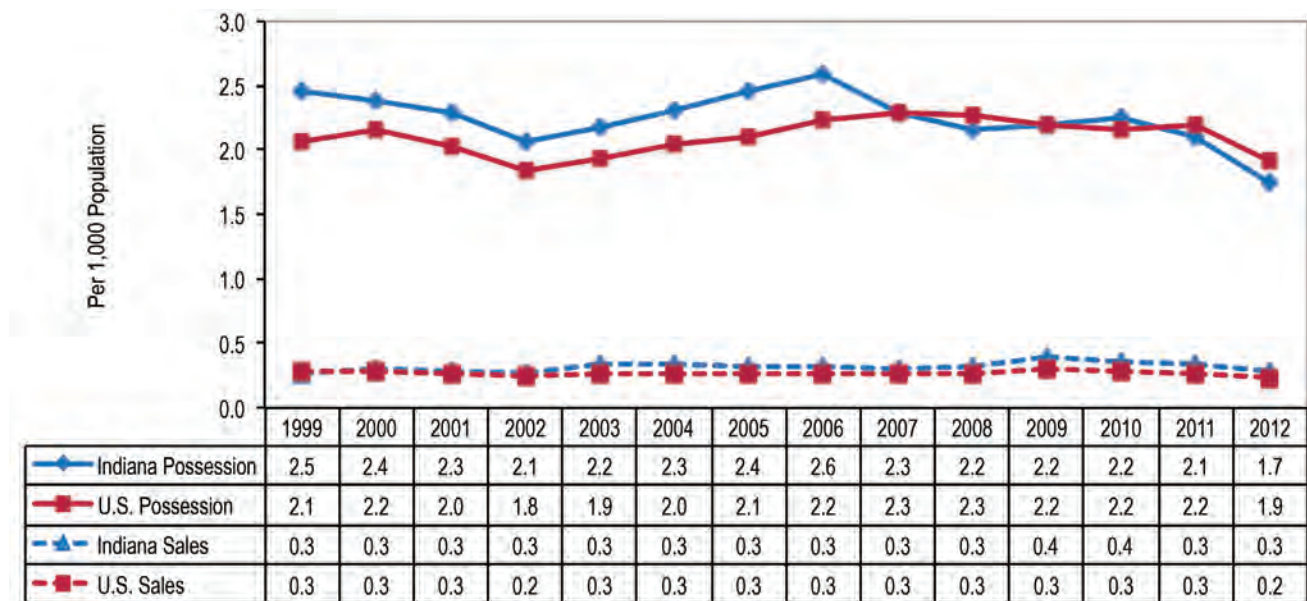
Maps 5.1 and 5.2 (pages 94 and 95) and Appendix 5C (pages 92–93) depict the distribution by county of 2012 arrest rates (per 1,000 population) due to marijuana possession and dealing (sale/manufacture) based on UCR data. While geographic/regional arrest patterns are not immediately apparent, these data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

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



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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, 2014)

County	Treatment Episodes	Marijuana Use		Marijuana Dependence	
	Total	Number	%	Number	%
Adams	151	98	64.9%	38	25.2%
Allen	1,717	1,116	65.0%	546	31.8%
Bartholomew	672	348	51.8%	91	13.5%
Benton	49	36	73.5%	14	28.6%
Blackford	58	23	39.7%	8	13.8%
Boone	227	84	37.0%	53	23.3%
Brown	91	41	45.1%	11	12.1%
Carroll	102	51	50.0%	23	22.5%
Cass	277	156	56.3%	47	17.0%
Clark	475	89	18.7%	45	9.5%
Clay	189	92	48.7%	50	26.5%
Clinton	201	92	45.8%	41	20.4%
Crawford	62	26	41.9%	10	16.1%
Daviess	151	66	43.7%	28	18.5%
Dearborn	508	260	51.2%	67	13.2%
Decatur	176	89	50.6%	23	13.1%
DeKalb	241	134	55.6%	51	21.2%
Delaware	1,037	448	43.2%	196	18.9%
Dubois	278	137	49.3%	60	21.6%
Elkhart	722	376	52.1%	231	32.0%
Fayette	216	92	42.6%	24	11.1%
Floyd	232	41	17.7%	20	8.6%
Fountain	57	34	59.6%	14	24.6%
Franklin	181	91	50.3%	33	18.2%
Fulton	217	124	57.1%	49	22.6%
Gibson	228	113	49.6%	53	23.2%
Grant	495	304	61.4%	123	24.8%
Greene	201	88	43.8%	36	17.9%
Hamilton	987	488	49.4%	264	26.7%
Hancock	207	112	54.1%	38	18.4%
Harrison	36	8	22.2%	<5	N/A
Hendricks	365	139	38.1%	78	21.4%
Henry	358	143	39.9%	60	16.8%
Howard	683	331	48.5%	118	17.3%
Huntington	97	48	49.5%	17	17.5%
Jackson	323	160	49.5%	56	17.3%
Jasper	111	40	36.0%	10	9.0%
Jay	98	51	52.0%	27	27.6%
Jefferson	380	146	38.4%	57	15.0%
Jennings	288	124	43.1%	41	14.2%
Johnson	239	110	46.0%	34	14.2%
Knox	309	115	37.2%	57	18.4%
Kosciusko	270	138	51.1%	56	20.7%
LaGrange	165	95	57.6%	39	23.6%
Lake	2,671	1,098	41.1%	574	21.5%
LaPorte	557	213	38.2%	97	17.4%
Lawrence	474	161	34.0%	89	18.8%

County	Treatment Episodes	Marijuana Use		Marijuana Dependence	
	Total	Number	%	Number	%
Madison	1,064	542	50.9%	278	26.1%
Marion	4,375	2,010	45.9%	990	22.6%
Marshall	255	127	49.8%	70	27.5%
Martin	51	22	43.1%	6	11.8%
Miami	305	178	58.4%	67	22.0%
Monroe	1,364	669	49.0%	245	18.0%
Montgomery	317	159	50.2%	81	25.6%
Morgan	477	225	47.2%	109	22.9%
Newton	38	14	36.8%	<5	N/A
Noble	220	122	55.5%	43	19.5%
Ohio	44	23	52.3%	8	18.2%
Orange	139	63	45.3%	16	11.5%
Owen	203	85	41.9%	43	21.2%
Parke	97	43	44.3%	20	20.6%
Perry	133	70	52.6%	25	18.8%
Pike	43	15	34.9%	6	14.0%
Porter	709	299	42.2%	123	17.3%
Posey	133	59	44.4%	22	16.5%
Pulaski	119	58	48.7%	10	8.4%
Putnam	229	89	38.9%	50	21.8%
Randolph	192	104	54.2%	42	21.9%
Ripley	249	122	49.0%	36	14.5%
Rush	160	102	63.8%	24	15.0%
Saint Joseph	1,543	786	50.9%	401	26.0%
Scott	130	24	18.5%	12	9.2%
Shelby	157	69	43.9%	36	22.9%
Spencer	169	96	56.8%	38	22.5%
Starke	247	102	41.3%	32	13.0%
Steuben	214	115	53.7%	34	15.9%
Sullivan	80	39	48.8%	14	17.5%
Switzerland	67	29	43.3%	10	14.9%
Tippecanoe	453	230	50.8%	73	16.1%
Tipton	65	36	55.4%	18	27.7%
Union	40	20	50.0%	5	12.5%
Vanderburgh	1,377	641	46.6%	298	21.6%
Vermillion	114	49	43.0%	19	16.7%
Vigo	729	402	55.1%	244	33.5%
Wabash	244	100	41.0%	43	17.6%
Warren	21	8	38.1%	<5	N/A
Warrick	328	155	47.3%	54	16.5%
Washington	95	9	9.5%	<5	N/A
Wayne	455	192	42.2%	57	12.5%
Wells	127	77	60.6%	30	23.6%
White	161	95	59.0%	36	22.4%
Whitley	104	73	70.2%	24	23.1%
County Info Missing	99	43	43.4%	16	16.2%
Indiana	35,764	16,959	47.4%	7,513	21.0%

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

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

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

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 5B

Percentage of Indiana Students Reporting Lifetime and Monthly Marijuana Use, by Region and Grade (Indiana Youth Survey, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	2.7	2.6	2.9	1.1	2.3	4.6*	1.8	1.1*	2.1
	Monthly	1.3	1.3	1.4	1.1	1.1	2.4*	1.3	0.5*	0.8
7th Grade	Lifetime	5.5	8.4*	6.9*	4.3	4.9	4.4*	5.4	3.5*	4.8
	Monthly	2.9	4.6*	3.3	3.2	2.7	2.3	3.2	1.9*	2.2
8th Grade	Lifetime	12.7	12.8	16.9*	7.1*	10.6*	13.7	15.4*	9.9*	12.3
	Monthly	6.8	6.7	9.7*	3.1*	5.7	7.6*	7.2	5.0*	6.4
9th Grade	Lifetime	17.8	23.9*	16.4	13.4*	17.7	16.5	19.6	13.4*	19.4*
	Monthly	9.4	14.0*	7.9*	7.6	9.2	8.7	10.0	6.6*	10.2
10th Grade	Lifetime	26.6	32.4*	29.9*	20.9*	26.2	24.3*	25.1	22.1*	27.6
	Monthly	13.6	17.1*	16.3*	11.9	14.0	11.8*	11.7	10.5*	14.3
11th Grade	Lifetime	32.1	41.1*	30.5	22.8*	28.5*	30.9	31.5	26.1*	35.3*
	Monthly	15.8	21.5*	13.2*	8.3*	16.3	14.9	13.4	13.1*	17.5*
12th Grade	Lifetime	37.4	43.9*	39.0	32.9	34.8	34.8*	40.4	33.2*	37.4
	Monthly	17.6	22.4*	18.4	16.6	15.7	16.7	18.6	14.3*	17.4

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

Source: Gassman, et al., 2014

APPENDIX 5C

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

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

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

* Rates based on arrest numbers lower than 20 are unreliable.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

94



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Indiana University Center for Health Policy



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

REFERENCES, CHAPTER 5

- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., Oi, S. E. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Indianapolis, IN: Indiana Family and Social Services Administration.
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- King, R.A., & Jun, M.K. (2014). *Results of the Indiana College Substance Use Survey–2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- Lynskey, M., Heath, A., Bucholz, K., Slutske, W., Madden, P., Nelson, E., et al. (2003). Escalation of drug use in early-onset cannabis users vs. co-twin controls. *JAMA*, 289(4), 427.
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2012). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- National Institute on Drug Abuse. (2014). *DrugFacts: Marijuana*. Retrieved from <http://www.drugabuse.gov/publications/drugfacts/marijuana>
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>
- Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh/reports>

COCAINE USE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

COCAINE CONSUMPTION

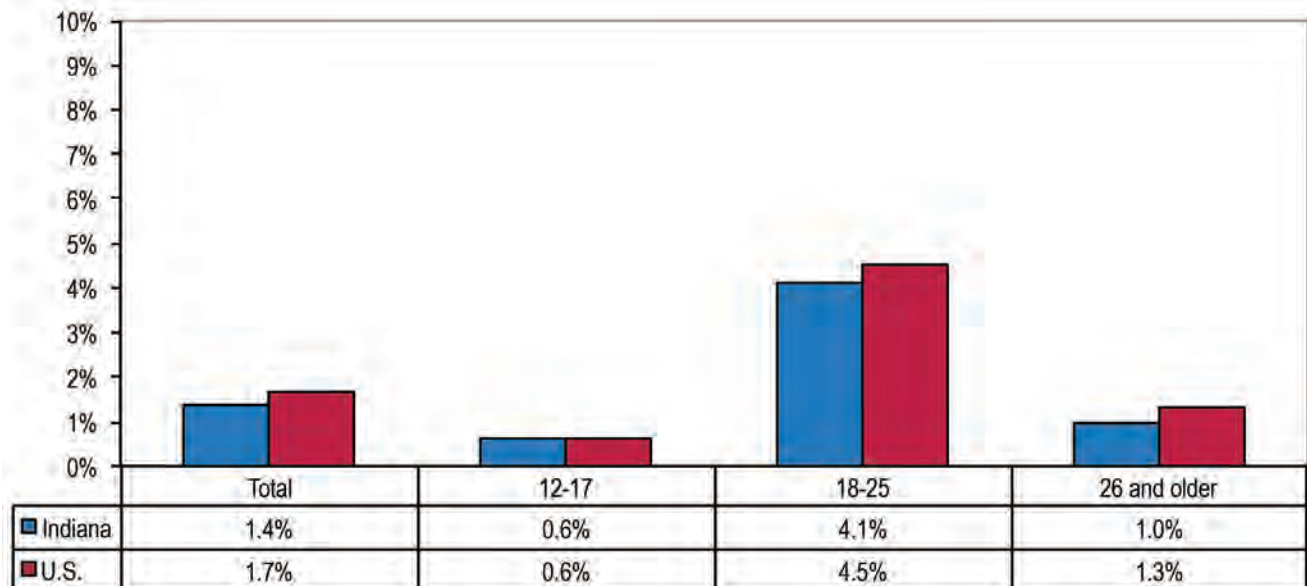
Cocaine is a highly addictive stimulant of natural origin. It can be snorted, smoked, or injected. When snorted, cocaine powder is inhaled through the nose where it is absorbed into the bloodstream through the nasal tissues. When injected, a needle is used to release the drug directly into the bloodstream. 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, 2014). According to 2012-2013 data, the most recent estimates available, 1.4% (95% Confidence Interval [CI]: 1.0–2.0) 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, 2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

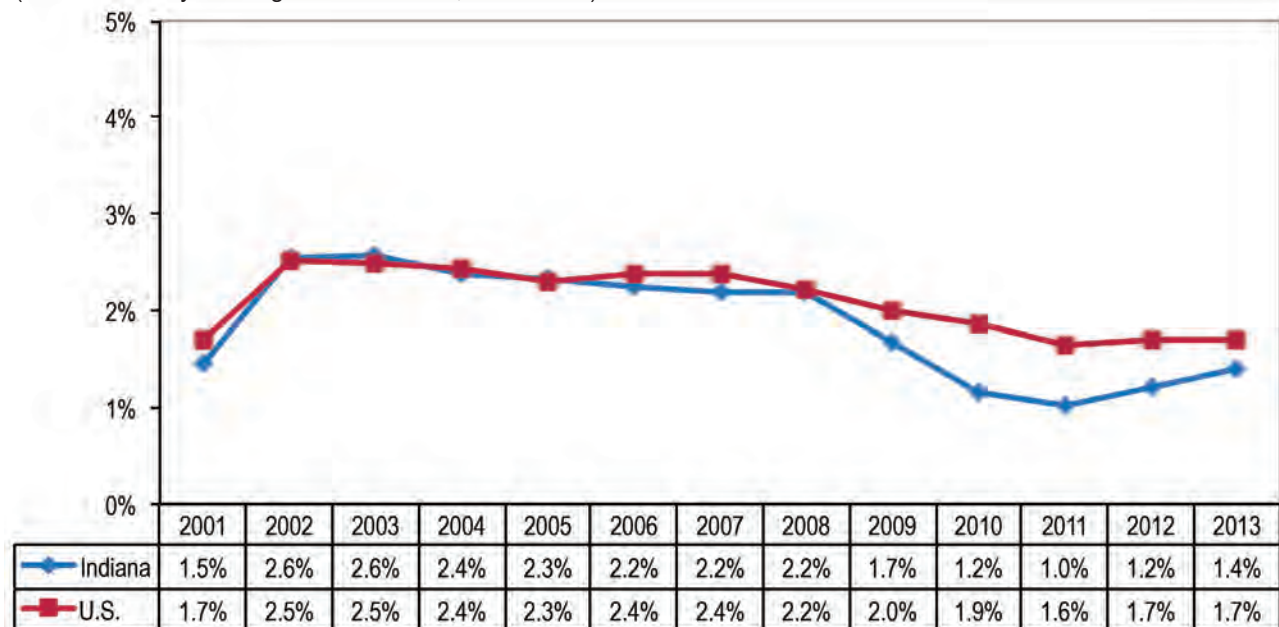
NSDUH data from 2001 through 2013 show that past-year cocaine use remained relatively stable in Indiana from 1.5% (95% CI: 1.1–2.0) in 2001 to 1.4% (95% CI: 0.9–1.7) in 2013, mirroring national rates (see Figure 6.2).

Publicly available NSDUH data currently do not include gender or race comparisons at the state

level (Substance Abuse and Mental Health Services Administration, 2014).

Publicly available NSDUH data currently do not include gender or race comparisons at the state level (Substance Abuse and Mental Health Services Administration, 2014).

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, 2001–2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

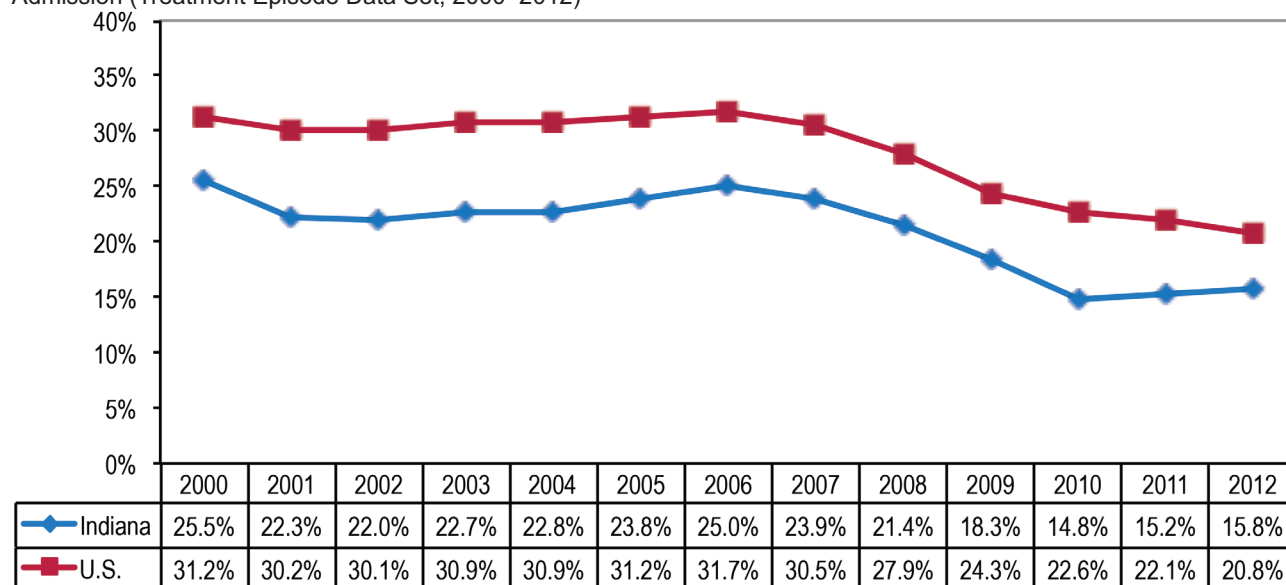
Adult Consumption Patterns

According to 2012–2013 NSDUH estimates, the prevalence rate for cocaine use was highest among 18- to 25-year-olds; 4.1% (95% CI: 3.0–5.7) of Hoosiers in that age group reported using cocaine in the past year (U.S.: 4.5%; 95% CI: 4.2–4.8). The rate of cocaine use was significantly lower among those ages 26 and older in Indiana (1.0%; 95% CI: 0.6–1.7) and the nation (1.3%; 95% CI: 1.2–1.5) (see Figure 6.1). Indiana and U.S. rates were statistically similar.

The Indiana College Substance Use Survey provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to findings from the 2014 survey, 2.3% of Indiana college students used cocaine in the past year (U.S.: 2.7%), and 0.7% currently use it (U.S.: 0.9%).¹ Rates were higher for males (past-year use: 3.8%; current use: 1.1%) than for females (past-year use: 1.4%; current use: 0.5%). Rates were also higher for those attending public institutions of higher education (past-year use: 3.2%; current use: 0.8%) than

¹National 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, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

for those who attended private institutions (past-year use: 1.2%; current use: 0.6%) (King & Jun, 2014).²

The 2012 Treatment Episode Data Set (TEDS) shows that cocaine use was reported in 15.8% of treatment episodes in Indiana; the U.S. percentage was significantly higher at 20.8% ($P < 0.001$) (see Figure 6.3) (Substance Abuse and Mental Health Data Archive, 2012).

Gender, age, and race differences in the Indiana treatment population were significant ($P < 0.001$). More women (17.5%) than men (14.9%) reported cocaine use; blacks displayed significantly higher percentages (31.2%) than whites (12.9%) and other races (18.7%); and adults ages 35 and older were more likely to report cocaine use than any of the younger age groups in treatment (see Table 6.1). (For county-level information on cocaine use, see Appendix 6A, page 105.)

Table 6.1 Percentage of Indiana Treatment Episodes with Cocaine Use Reported at Treatment Admission (Treatment Episode Data Set, 2012)

		Cocaine Use
Gender	Male	14.9%
	Female	17.5%
Race	White	12.9%
	Black	31.2%
	Other	18.7%
Age Group	Under 18	7.7%
	18-24	9.0%
	25-34	14.1%
	35-44	21.4%
	45-54	24.4%
	55 and over	20.9%
Total		15.8%

Source: Substance Abuse and Mental Health Data Archive, 2012

²Twelve 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 2012-2013 NSDUH survey show that 0.6 (95% CI: 0.3–1.0) of 12- to 17-year-old Hoosiers used cocaine in the past year (see Figure 6.1). The national rate was the same (0.6%; 95% CI: 0.5–0.7) (Substance Abuse and Mental Health Services Administration, 2014).

According to the 2011 Youth Risk Behavior Surveillance System (YRBSS), 5.6% (95% CI: 4.1–7.7) of Indiana high school students (grades 9 through 12) reported that they had used a form of cocaine, including powder, crack, or freebase, at least once in their life; 2.3% (95% CI: 1.7–3.2) stated that they currently use cocaine (Centers for Disease Control and Prevention, 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 Indiana Youth Survey, rates of current cocaine and crack use among 12th grade students have remained fairly stable from 2000 through 2014. Comparisons with the national Monitoring the Future survey imply that Indiana rates were slightly above U.S. rates for cocaine use but comparable with U.S. rates for crack use (see Figure 6.4); however, due to the nature of the publicly available data, no statistical significance

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)

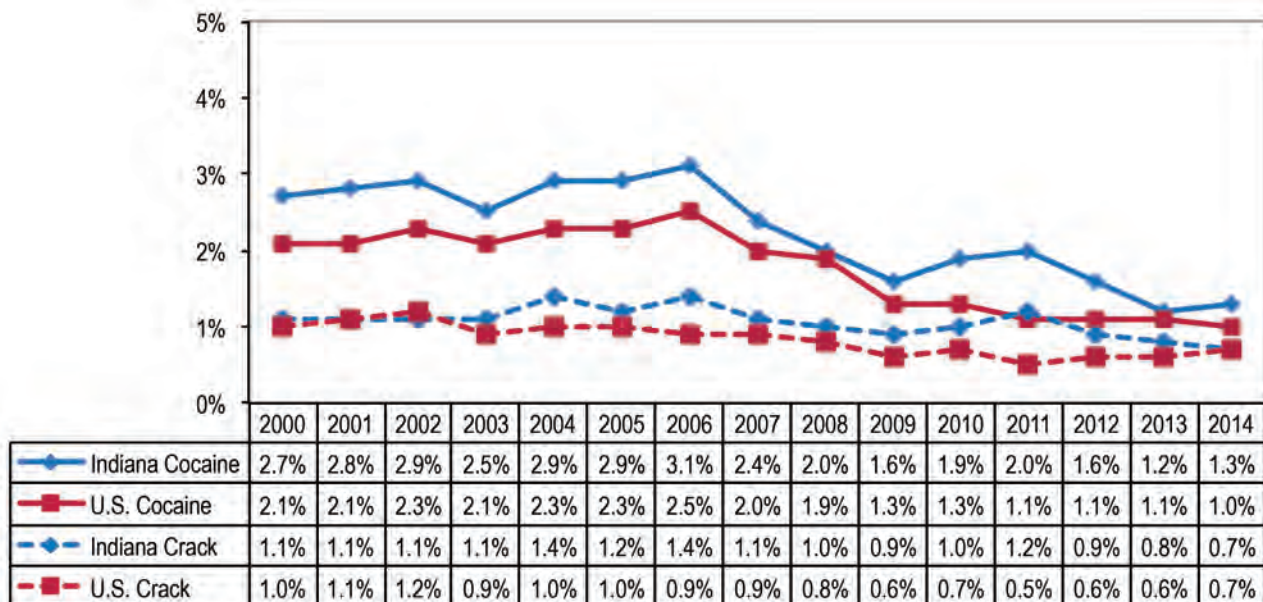
		Indiana		U.S.	
		Lifetime Use (95% CI)	Current Use (95% CI)	Lifetime Use (95% CI)	Current Use (95% CI)
Gender	Male	6.4% (3.9–10.1)	2.9% (1.7–4.7)	7.9% (7.0–8.9)	4.1% (3.5–4.9)
	Female	4.9% (3.6–6.6)	1.7% (0.9–3.1)	5.7% (4.9–6.5)	1.8% (1.5–2.3)
Race/Ethnicity	White	5.5% (3.9–7.7)	2.4% (1.7–3.4)	6.7% (6.0–7.5)	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

could be inferred (Gassman, Jun, Samuel, Agley, Lee, Crane, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014). For

2014 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 106.

Figure 6.4 Percentage of Indiana and U.S. High School Seniors (Grade 12) Reporting Current Cocaine and Crack Use (Indiana Youth Survey and Monitoring the Future Survey, 2000–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

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).

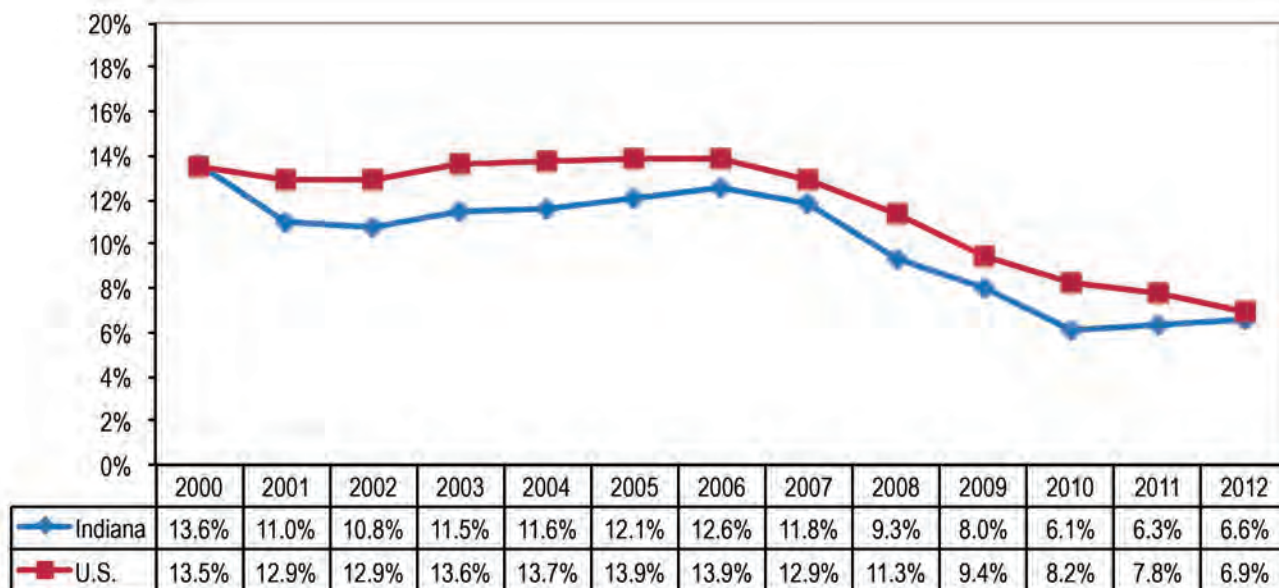
The medical consequences of cocaine abuse are

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 percentages of treatment admissions for cocaine dependence³ in 2012 were similar in Indiana

Figure 6.5 Percentage of Indiana and U.S. Treatment Episodes with Cocaine Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

³We defined cocaine dependence as “individuals in substance abuse treatment listing cocaine as their primary substance at admission.”

(6.6%) and the nation (6.9%), and have decreased significantly since 2000 (IN: 13.6%; U.S.: 13.5) to 2012 (IN: 6.6%; U.S.: 6.9%) (see Figure 6.5) (Substance Abuse and Mental Health Data Archive, 2012).

According to 2012 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 men (5.9%); among blacks (17.2%) than among whites (4.6%) or other races (7.5%); and among adults ages 35 and older (see Table 6.3) (Substance Abuse and Mental Health Data Archive, 2011). (For county-level information, see Appendix 6A, page 105.)

Legal and Criminal Consequences

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

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

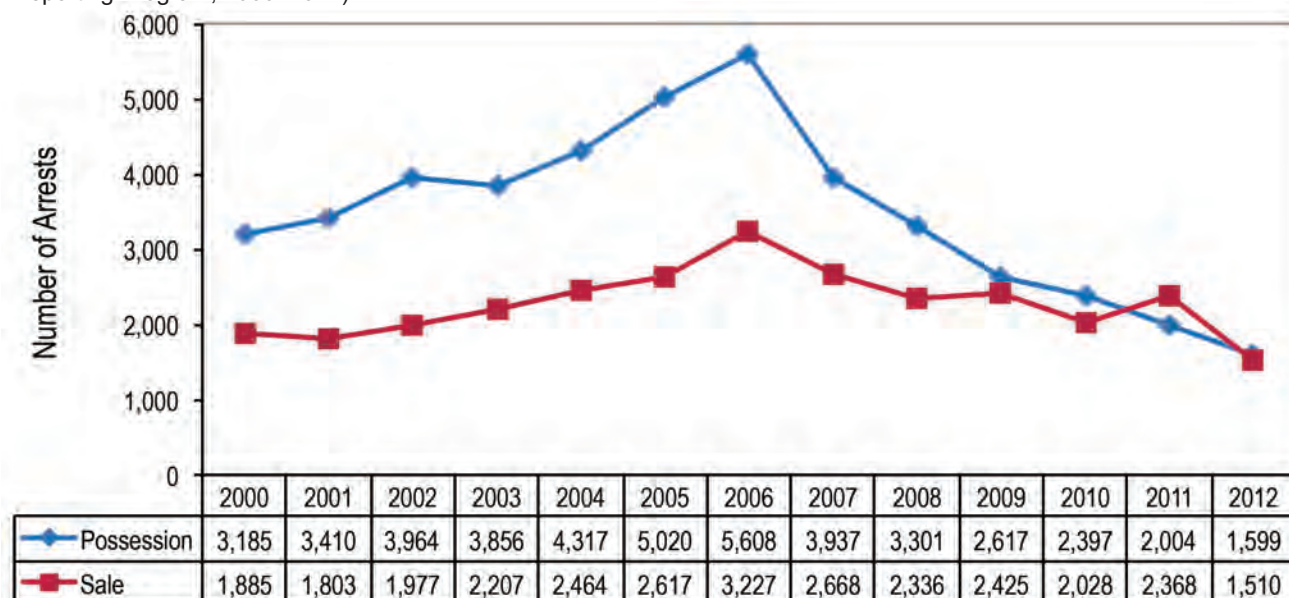
The number of arrests for both possession and sale has steadily decreased since 2006 (see Figures 6.6 and 6.7). Maps 6.1 and 6.2 (pages 109-110) and Appendix 6C (pages 107-108) show Indiana's cocaine/opiates possession and sale/manufacture arrests by county for 2012.

Table 6.3 Percentage of Indiana Treatment Episodes with Cocaine Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2012)

		Cocaine Dependence
Gender	Male	5.9%
	Female	7.8%
Race	White	4.6%
	Black	17.2%
	Other	7.5%
Age Group	Under 18	2.5%
	18-24	2.6%
	25-34	4.8%
	35-44	10.4%
	45-54	12.1%
	55 and over	11.0%
Total		6.6%

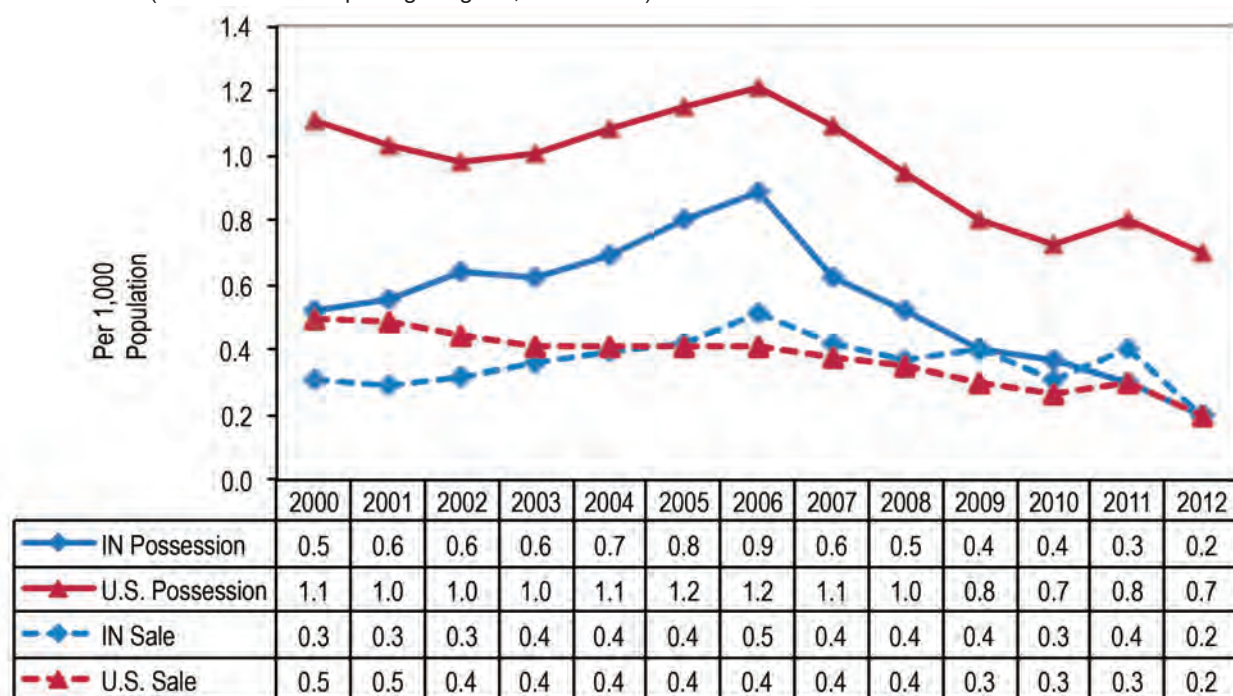
Source: Substance Abuse and Mental Health Data Archive, 2012

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



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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, 2014)

	Treatment Episodes	Cocaine Use		Cocaine Dependence	
County	Total	Number	%	Number	%
Adams	151	25	16.6%	<5	N/A
Allen	1,717	350	20.4%	121	7.0%
Bartholomew	672	58	8.6%	7	1.0%
Benton	49	<5	N/A	<5	N/A
Blackford	58	<5	N/A	<5	N/A
Boone	227	6	2.6%	<5	N/A
Brown	91	7	7.7%	<5	N/A
Carroll	102	6	5.9%	<5	N/A
Cass	277	23	8.3%	<5	N/A
Clark	475	47	9.9%	24	5.1%
Clay	189	<5	N/A	<5	N/A
Clinton	201	13	6.5%	<5	N/A
Crawford	62	<5	N/A	<5	N/A
Daviess	151	<5	N/A	<5	N/A
Dearborn	508	47	9.3%	5	1.0%
Decatur	176	11	6.3%	<5	N/A
DeKalb	241	26	10.8%	<5	N/A
Delaware	1,037	119	11.5%	44	4.2%
Dubois	278	12	4.3%	<5	N/A
Elkhart	722	70	9.7%	31	4.3%
Fayette	216	19	8.8%	<5	N/A
Floyd	232	19	8.2%	6	2.6%
Fountain	57	5	8.8%	<5	N/A
Franklin	181	12	6.6%	<5	N/A
Fulton	217	13	6.0%	<5	N/A
Gibson	228	<5	N/A	<5	N/A
Grant	495	51	10.3%	15	3.0%
Greene	201	<5	N/A	<5	N/A
Hamilton	987	92	9.3%	26	2.6%
Hancock	207	22	10.6%	8	3.9%
Harrison	36	5	13.9%	<5	N/A
Hendricks	365	23	6.3%	8	2.2%
Henry	358	18	5.0%	<5	N/A
Howard	683	84	12.3%	21	3.1%
Huntington	97	8	8.2%	<5	N/A
Jackson	323	18	5.6%	<5	N/A
Jasper	111	12	10.8%	<5	N/A
Jay	98	6	6.1%	<5	N/A
Jefferson	380	28	7.4%	5	1.3%
Jennings	288	19	6.6%	<5	N/A
Johnson	239	31	13.0%	<5	N/A
Knox	309	4	1.3%	<5	N/A
Kosciusko	270	14	5.2%	<5	N/A
LaGrange	165	12	7.3%	<5	N/A
Lake	2,671	414	15.5%	184	6.9%
LaPorte	557	78	14.0%	29	5.2%
Lawrence	474	8	1.7%	<5	N/A

	Treatment Episodes	Cocaine Use		Cocaine Dependence	
County	Total	Number	%	Number	%
Madison	1,064	92	8.6%	31	2.9%
Marion	4,375	874	20.0%	368	8.4%
Marshall	255	16	6.3%	6	2.4%
Martin	51	<5	N/A	<5	N/A
Miami	305	18	5.9%	<5	N/A
Monroe	1,364	103	7.6%	26	1.9%
Montgomery	317	14	4.4%	<5	N/A
Morgan	477	22	4.6%	6	1.3%
Newton	38	<5	N/A	<5	N/A
Noble	220	19	8.6%	6	2.7%
Ohio	44	8	18.2%	<5	N/A
Orange	139	<5	N/A	<5	N/A
Owen	203	7	3.4%	<5	N/A
Parke	97	4	4.1%	<5	N/A
Perry	133	9	6.8%	<5	N/A
Pike	43	<5	N/A	<5	N/A
Porter	709	80	11.3%	17	2.4%
Posey	133	<5	N/A	<5	N/A
Pulaski	119	7	5.9%	<5	N/A
Putnam	229	7	3.1%	<5	N/A
Randolph	192	26	13.5%	6	3.1%
Ripley	249	19	7.6%	<5	N/A
Rush	160	11	6.9%	<5	N/A
Saint Joseph	1,543	411	26.6%	196	12.7%
Scott	130	4	3.1%	<5	N/A
Shelby	157	13	8.3%	<5	N/A
Spencer	169	7	4.1%	<5	N/A
Starke	247	11	4.5%	<5	N/A
Steuben	214	12	5.6%	<5	N/A
Sullivan	80	<5	N/A	<5	N/A
Switzerland	67	<5	N/A	<5	N/A
Tippecanoe	453	47	10.4%	7	1.5%
Tipton	65	<5	N/A	<5	N/A
Union	40	<5	N/A	<5	N/A
Vanderburgh	1,377	83	6.0%	33	2.4%
Vermillion	114	<5	N/A	<5	N/A
Vigo	729	40	5.5%	8	1.1%
Wabash	244	5	2.0%	<5	N/A
Warren	21	<5	N/A	<5	N/A
Warrick	328	9	2.7%	<5	N/A
Washington	95	5	5.3%	<5	N/A
Wayne	455	94	20.7%	29	6.4%
Wells	127	7	5.5%	<5	N/A
White	161	7	4.3%	<5	N/A
Whitley	104	8	7.7%	<5	N/A
County Info Missing	99	8	8.1%	<5	N/A
Indiana	35,764	3,983	11.1%	1,355	3.8%

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 (Indiana Youth Survey, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.4	0.2	0.6	0.0	0.8	0.6	0.5	0.3	0.2
	Monthly	0.2	0.1	0.3	0.0	0.3	0.3	0.5	0.2	0.0
7th Grade	Lifetime	0.6	*1.0	0.6	1.1	0.5	0.5	0.3	0.4	0.6
	Monthly	0.3	0.5	0.2	0.4	0.5	0.3	0.3	0.2	0.3
8th Grade	Lifetime	1.1	1.1	1.1	1.5	1.1	1.4	1.0	0.9	1.0
	Monthly	0.5	0.6	0.4	0.5	0.5	0.6	0.3	0.5	0.3
9th Grade	Lifetime	1.7	1.6	1.9	2.1	1.7	1.6	1.6	1.4	2.3
	Monthly	0.8	0.8	1.1	0.6	0.6	0.7	0.6	0.5	1.0
10th Grade	Lifetime	2.4	2.8	2.8	1.9	2.8	2.2	2.4	1.6	2.7
	Monthly	0.9	1.0	1.2	0.2	0.9	1.0	1.0	0.6	0.9
11th Grade	Lifetime	3.1	3.8	3.3	3.1	2.9	3.2	3.6	*2.2	3.0
	Monthly	1.0	1.4	1.0	1.1	1.1	0.9	1.3	0.8	0.9
12th Grade	Lifetime	4.1	*5.1	4.3	5.8	3.5	3.5	5.6	*3.0	4.1
	Monthly	1.3	1.5	1.3	0.3	1.8	1.0	*2.2	*0.8	1.5

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

Source: Gassman et al., 2014

APPENDIX 6B - PART 2

Percentage of Indiana Students Reporting Lifetime and Monthly Crack Use, by Region and Grade (Indiana Youth Survey, 2014)

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

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

Source: Gassman et al., 2014

APPENDIX 6C

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

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

(continued on next page)

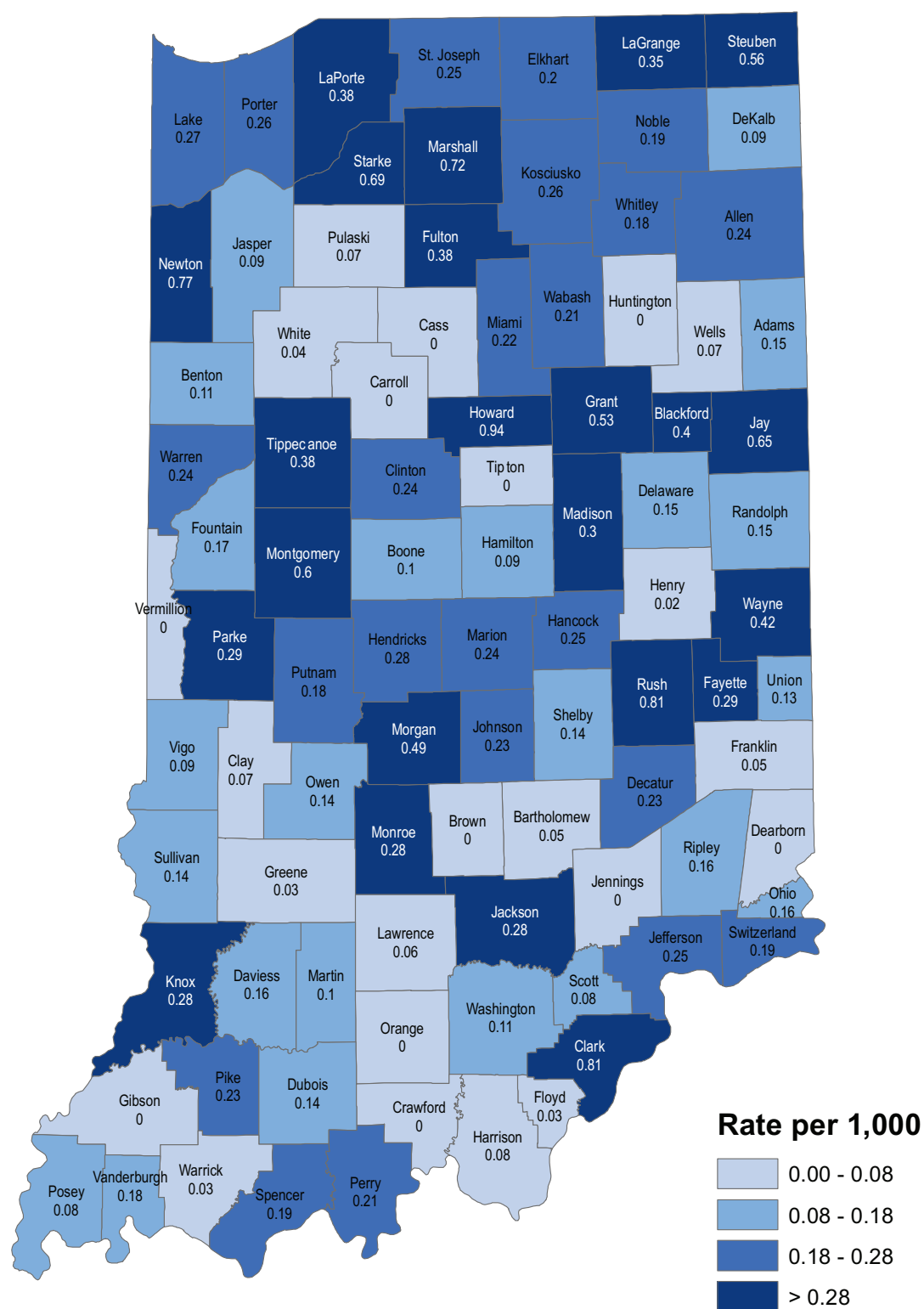
APPENDIX 6C (Continued from previous page)

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

* Rates based on arrest numbers lower than 20 are unreliable.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

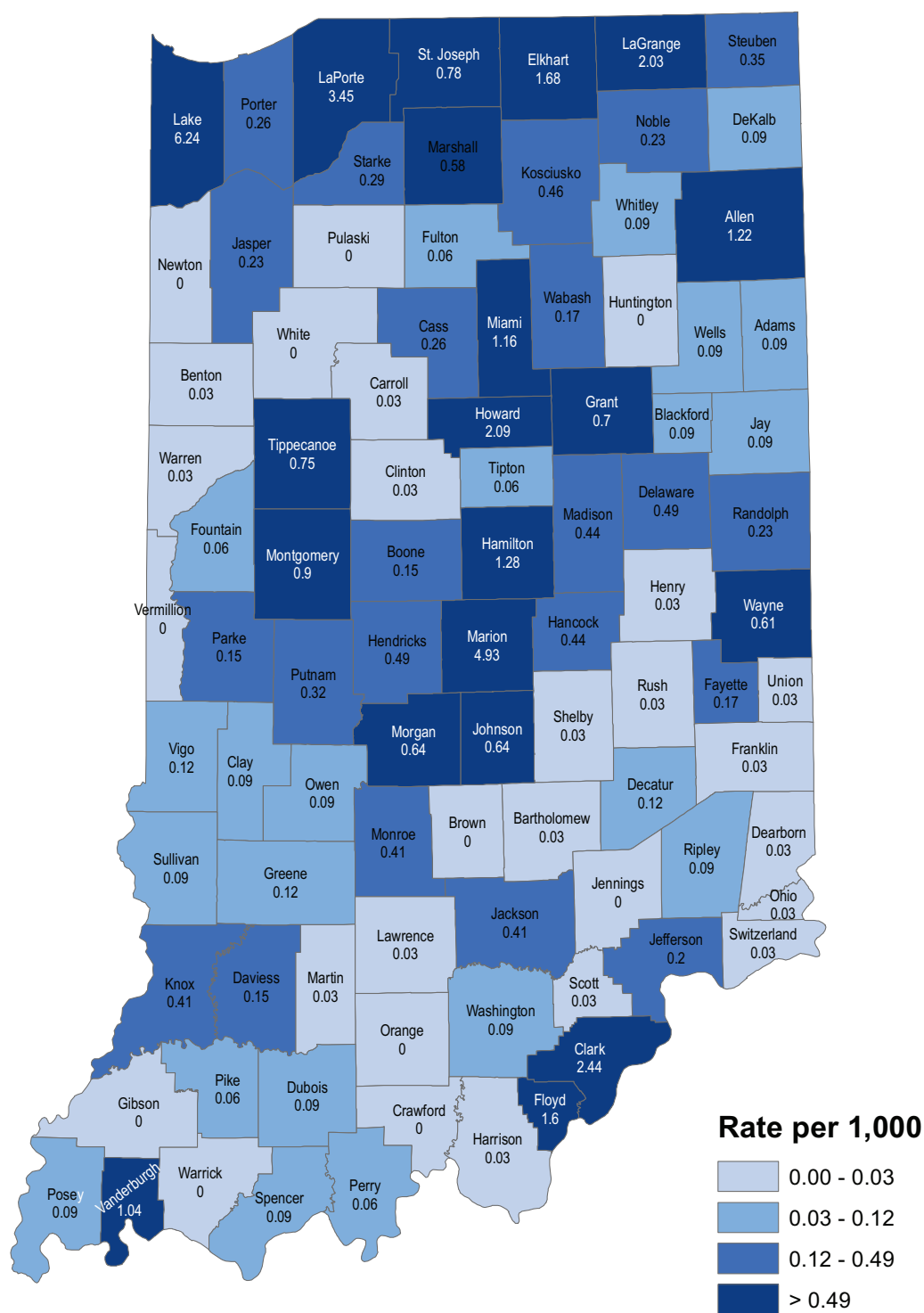
Map 6.1 Cocaine/Opiate Possession Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2012)



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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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



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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

REFERENCES, CHAPTER 6

- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Gassman, R., Jun, M. C., Samuel, S., Agley, J. D., Lee, J., Crane, M. K., Boyken, J., Oi, S. E., Pardue, S. E., Smith, J. N., & Stigger, C. K. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Indianapolis, IN: Indiana Family and Social Services Administration.
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2014). *Monitoring the Future national survey results on drug use, 1975–2010: Volume II, College students and adults ages 19–50*. Ann Arbor: Institute for Social Research, The University of Michigan.
- King, R. A., & Jun, M. K. (2014). *Results of the Indiana College Substance Use Survey—2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2012). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- National Institute on Drug Abuse. (2010). *Cocaine: Abuse and addiction*. Retrieved from <http://www.drugabuse.gov/publications/research-reports/cocaine-abuse-addiction>
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>
- Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh>

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 2013 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)

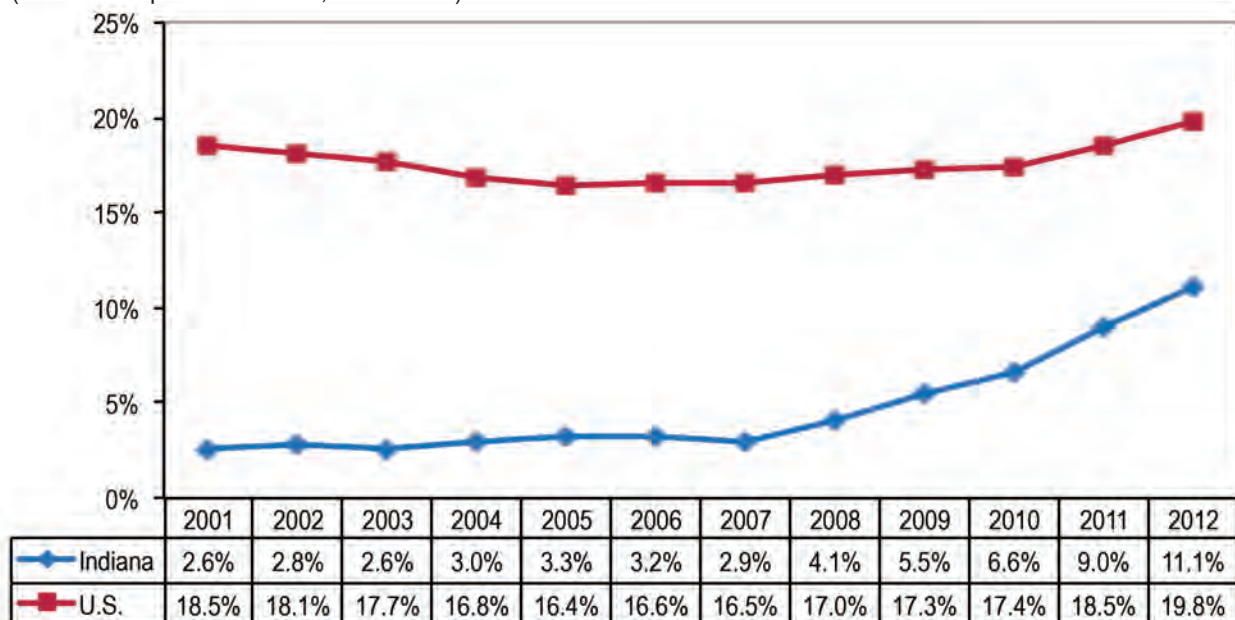
- past-year use: 0.2% (approximately 9,000 residents)
- current use: less than 0.1% (approximately 1,000 residents)

(Substance Abuse and Mental Health Services Administration, 2014).

Adult Consumption Patterns

Heroin use prevalence in the general population is very low. The Indiana College Substance Use Survey² provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to 2014 results, 0.3% of Indiana college students had used heroin in the past year (U.S.: 0.3%) and 0.1% had used it in the past month (U.S.: 0.2%); 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 (0.5%) than for females (0.2%), but there were no significant gender differences for current use (males: 0.2%; females: 0.1%).

Figure 7.1 Percentage of Indiana and U.S. Treatment Episodes with Heroin Use Reported at Treatment Admission (Treatment Episode Data Set, 2001–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

¹Estimates based on NSDUH averages from 2002 through 2004 represent the most recent state-level data available.

²Twelve Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

No significant differences were detected by age group (under 21 vs. 21 or over) or type of academic institution (private vs. public) (King & Jun, 2014).

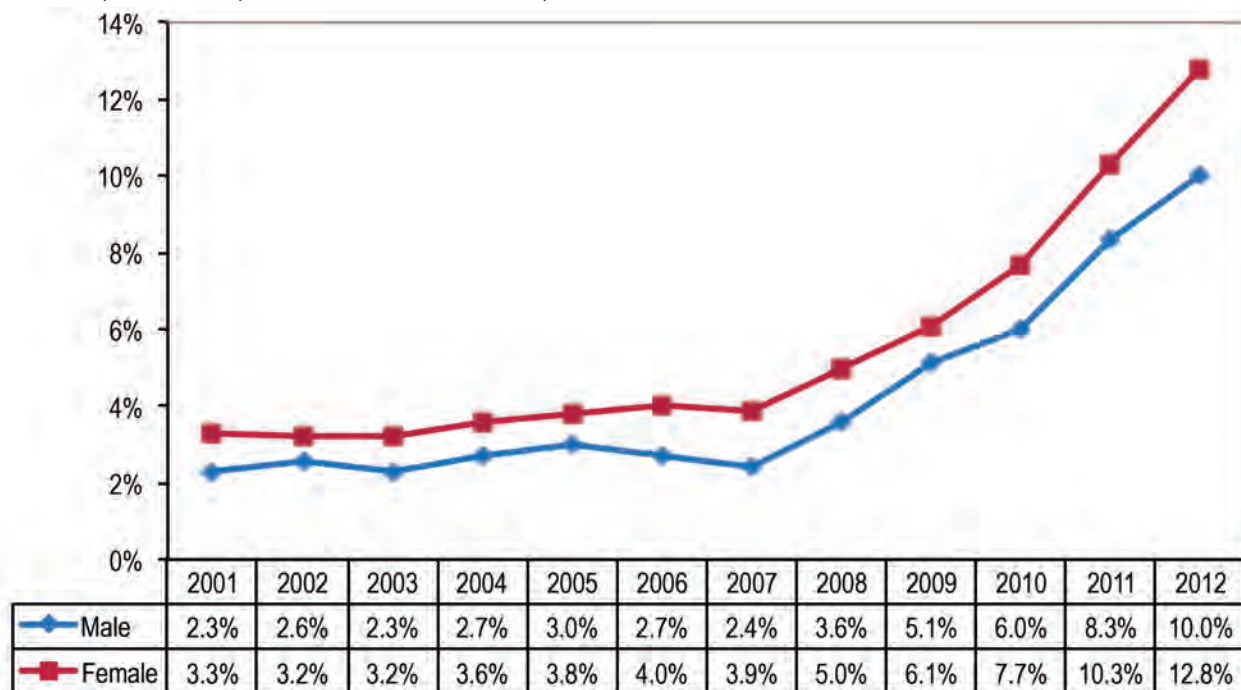
Data from the Treatment Episode Data Set (TEDS) spanning 2001 through 2012 show that the percentage of treatment episodes in which heroin use was reported at admission was significantly lower in Indiana than the United States ($P < 0.001$). In 2012, 11.1% of Hoosiers in treatment reported heroin use, as compared to 19.8% of Americans. Reported heroin use, however, continued to increase in Indiana from 2.6% in 2001 to 11.1% in 2012 (see Figure 7.1) (Substance Abuse and Mental Health Data Archive, 2012). For 2014 county-level information on treatment admissions with reported heroin use in Indiana, see Appendix 7A, page 122.

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

- **Gender**—From 2001 through 2012, the percentage of females reporting use of the drug was significantly higher than the percentage of males (see Figure 7.2).

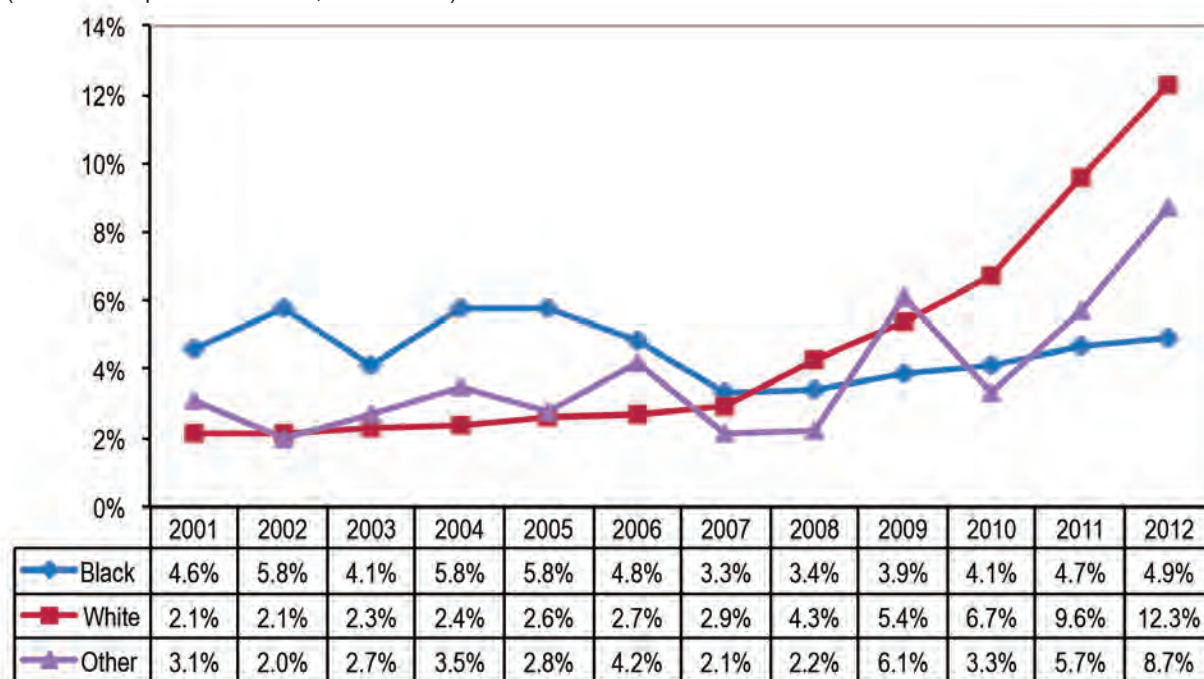
- **Race**—Reported heroin use also differed significantly by race for most years examined (2001 through 2012, except 2007). Until 2005, blacks had higher percentages of reported use than whites or other races. Since 2008, the percentage of whites reporting heroin use has seen a sharp increase and is currently the highest (see Figure 7.3).
- **Age**—Up until 2007, heroin use within Indiana's treatment population was primarily associated with older adults ages 45 and above. However, this has changed dramatically. The percentage of young adults ages 18 to 34 who reported heroin use rose significantly in the past 11 years. Furthermore, the percentage of youth less than 18 years old abusing heroin saw a sharp increase from less than 1.0% up until 2009 to 11.5% in 2012 (see Figure 7.4) (Substance Abuse and Mental Health Data Archive, 2012).

Figure 7.2 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2001–2012)



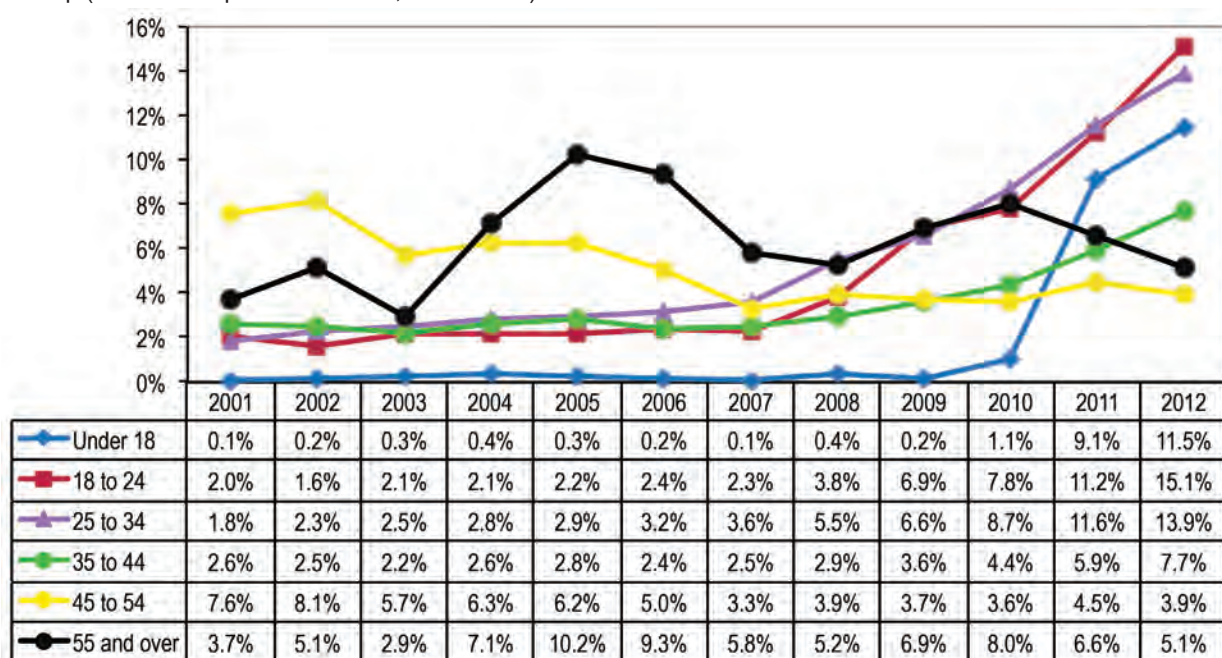
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 7.3 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2001–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 7.4 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2001–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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).

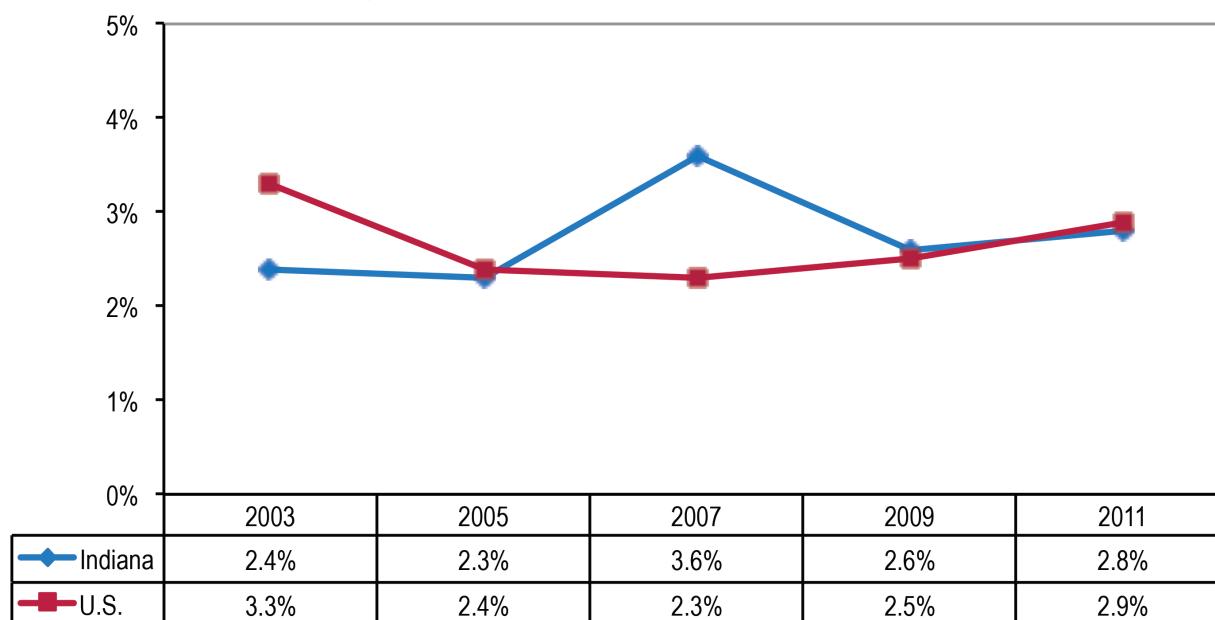
As noted previously, a common method for heroin usage is by needle injection. According to the 2011 YRBSS, the percentage of students who used a needle to inject any illegal drug into their body one or more times during their lifetime was statistically similar in Indiana (2.1%; 95% CI: 1.3–3.2) and the 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 2014 Indiana Youth Survey, 1.8% of Hoosier 12th grade students reported lifetime use (U.S. 1.0%) and 0.7% reported monthly (current) heroin use (U.S.: 0.4%) (see Figures 7.6 and 7.7) (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014).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., 2014). For lifetime and monthly heroin use rates in Indiana by region and grade level, see Appendix 7B, page 123.

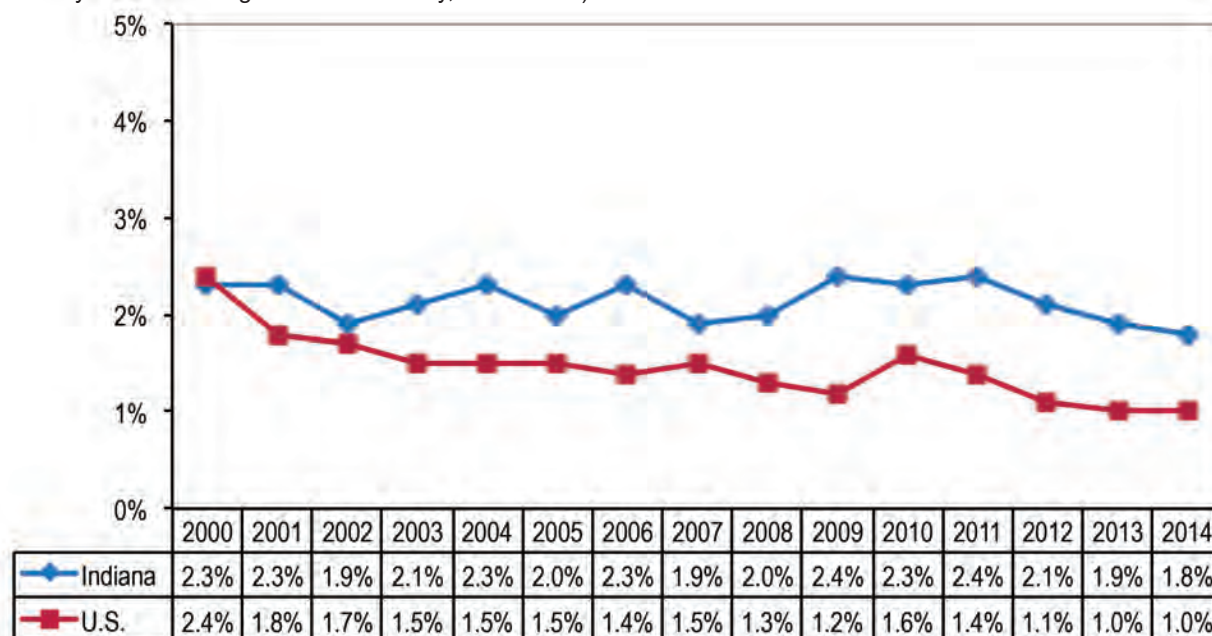
Figure 7.5 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Who Have Used Heroin at Least Once During their Lifetime (Youth Risk Behavior Surveillance System, 2003–2011)



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

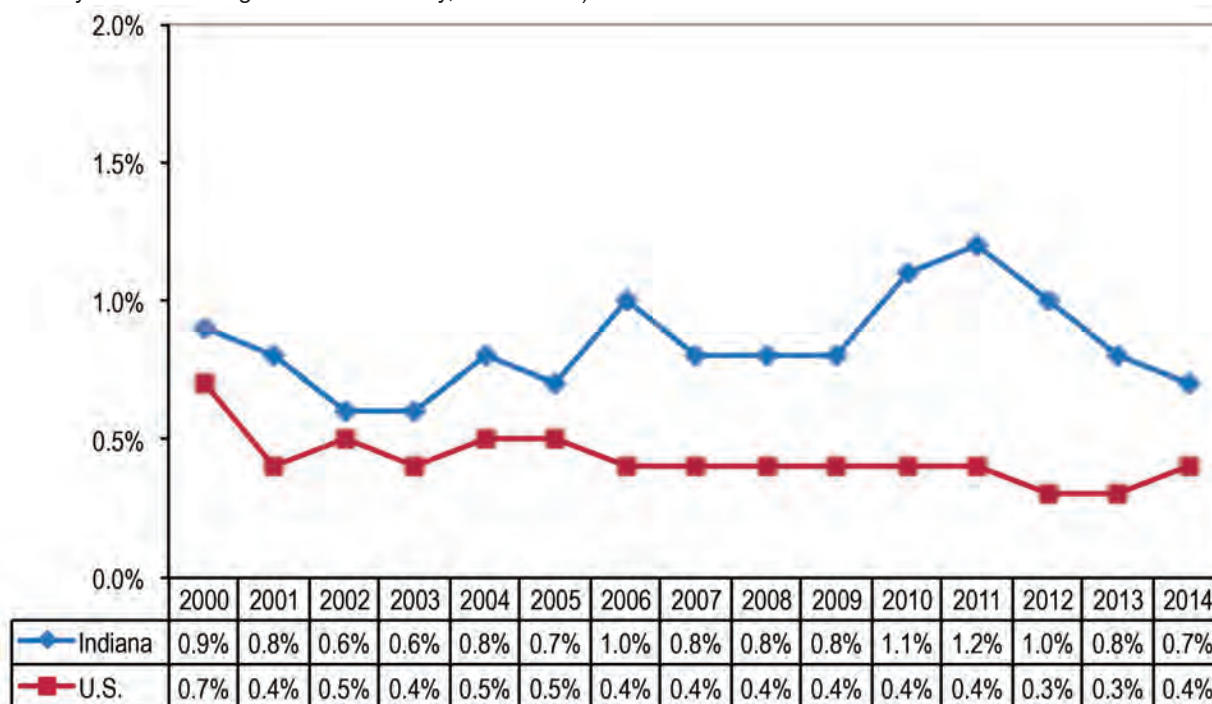
³Due to lack of detail provided in the publicly available data sets, statistical significance between Indiana and U.S. rate differences could not be ascertained.

Figure 7.6 Percentage of Indiana and U.S. 12th Grade Students Reporting Lifetime Heroin Use (Indiana Youth Survey and Monitoring the Future Survey, 2000–2014)



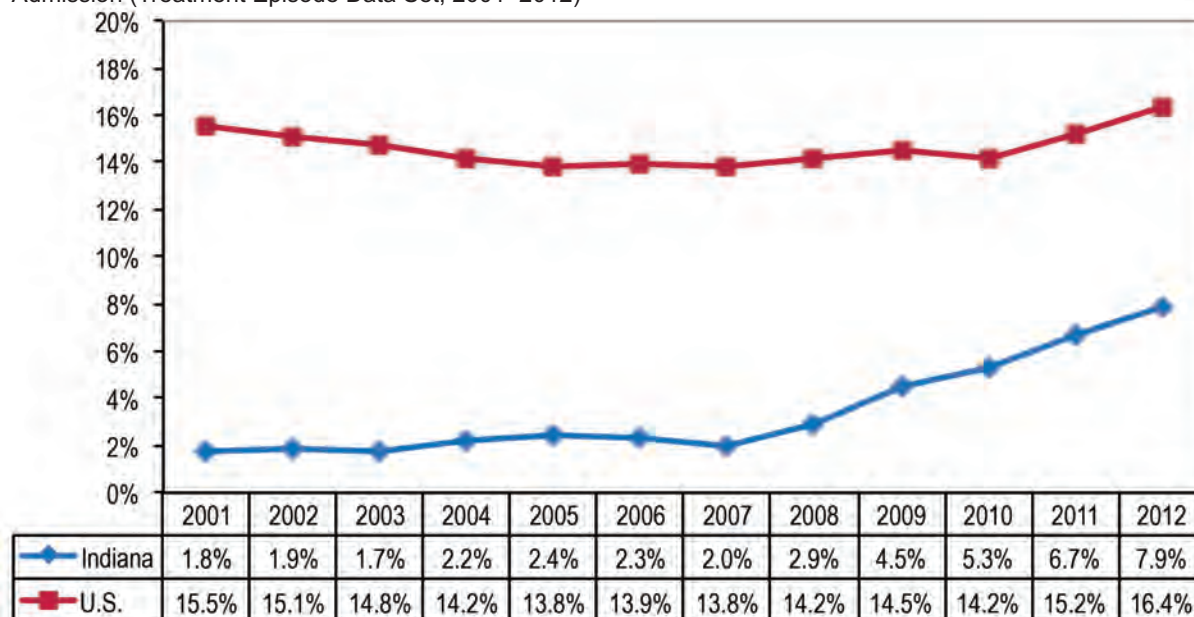
Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

Figure 7.7 Percentage of Indiana and U.S. 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey and Monitoring the Future Survey, 2000–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

Figure 7.8 Percentage of Indiana and U.S. Treatment Episodes with Heroin Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2001–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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 2012 shows that the

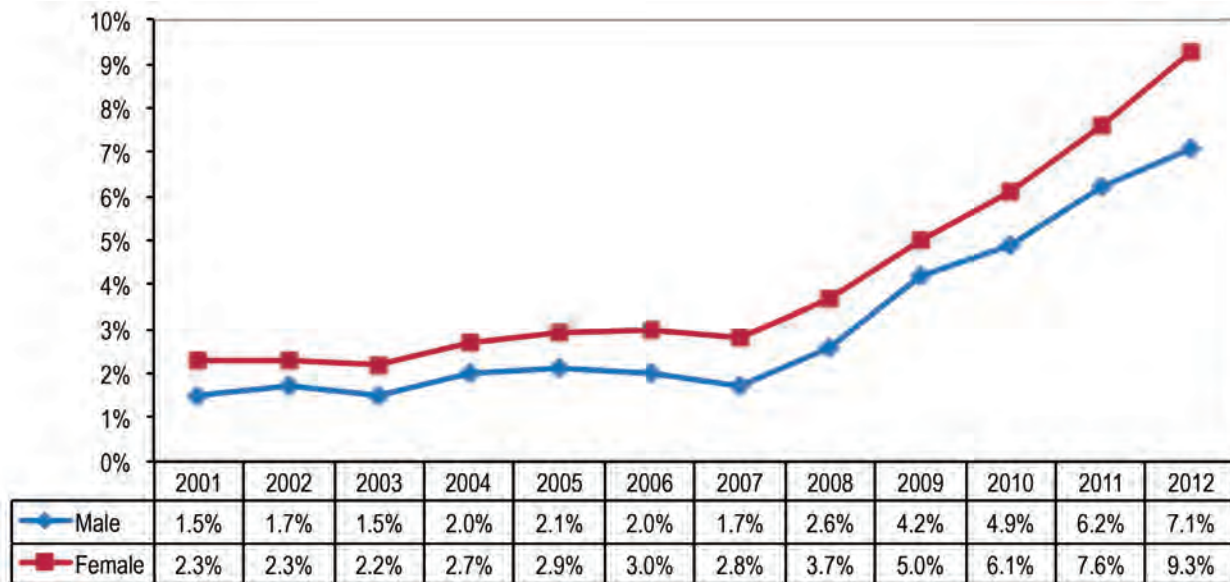
percentage of drug treatment admissions for heroin dependence⁴ has consistently been lower in Indiana than the rest of the United States ($P < 0.001$). In addition, heroin dependence in Indiana has increased considerably, from 1.8% in 2001 to 7.9% in 2012 (see Figure 7.8).

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, 2012):

- **Gender**—The percentage of women with heroin dependence was greater than the percentage of men, at 9.3% and 7.1%, respectively (see Figure 7.9).
- **Race**—From 2001 through 2007, the percentage of whites with heroin dependence was relatively low. Since 2008, however, the percentage within this racial group has risen steeply; whites now make up the highest percentage of heroin dependence in Indiana's treatment admissions. The percentage of blacks with heroin dependence has remained relatively stable over the years. Heroin dependence in those who identify as other races has significantly risen from 3.8% in 2011 to 6.2% in 2012 (see Figure 7.10).
- **Age**—Heroin dependence was reported predominantly by young adults under 34 years of age. The percentage of heroin dependence in those under 18 jumped from 6.9% in 2011 to 9.3% in 2012 (see Figure 7.11).

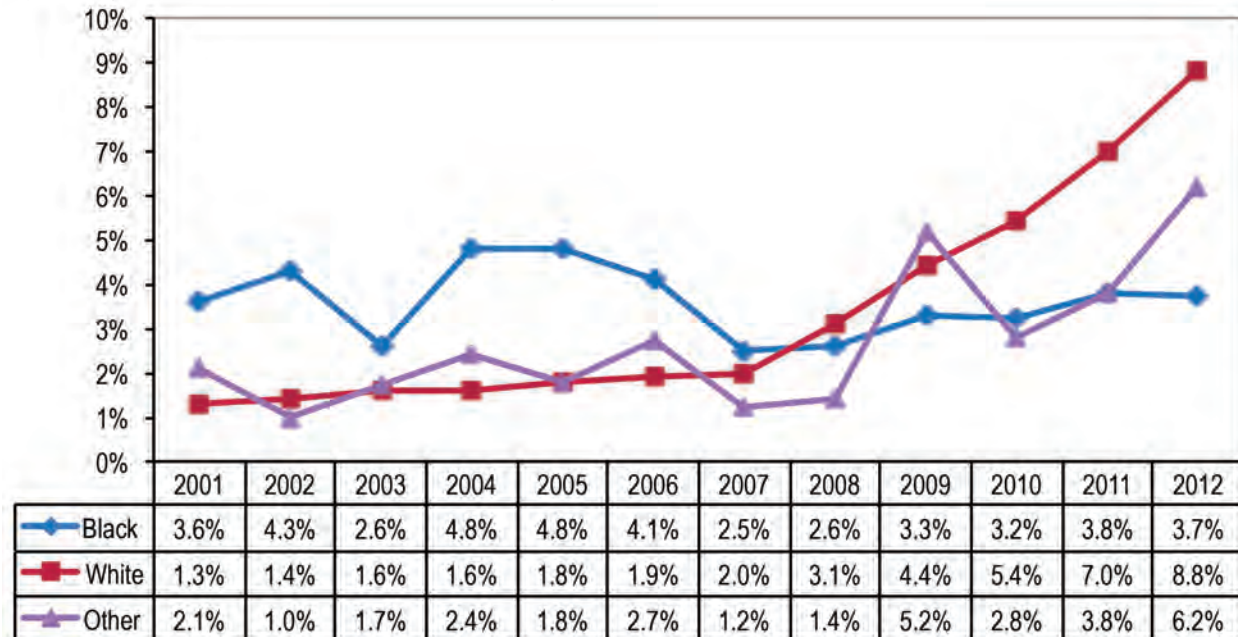
⁴We defined heroin dependence as "individuals in substance abuse treatment listing heroin as their primary substance at admission."

Figure 7.9 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2001–2012)



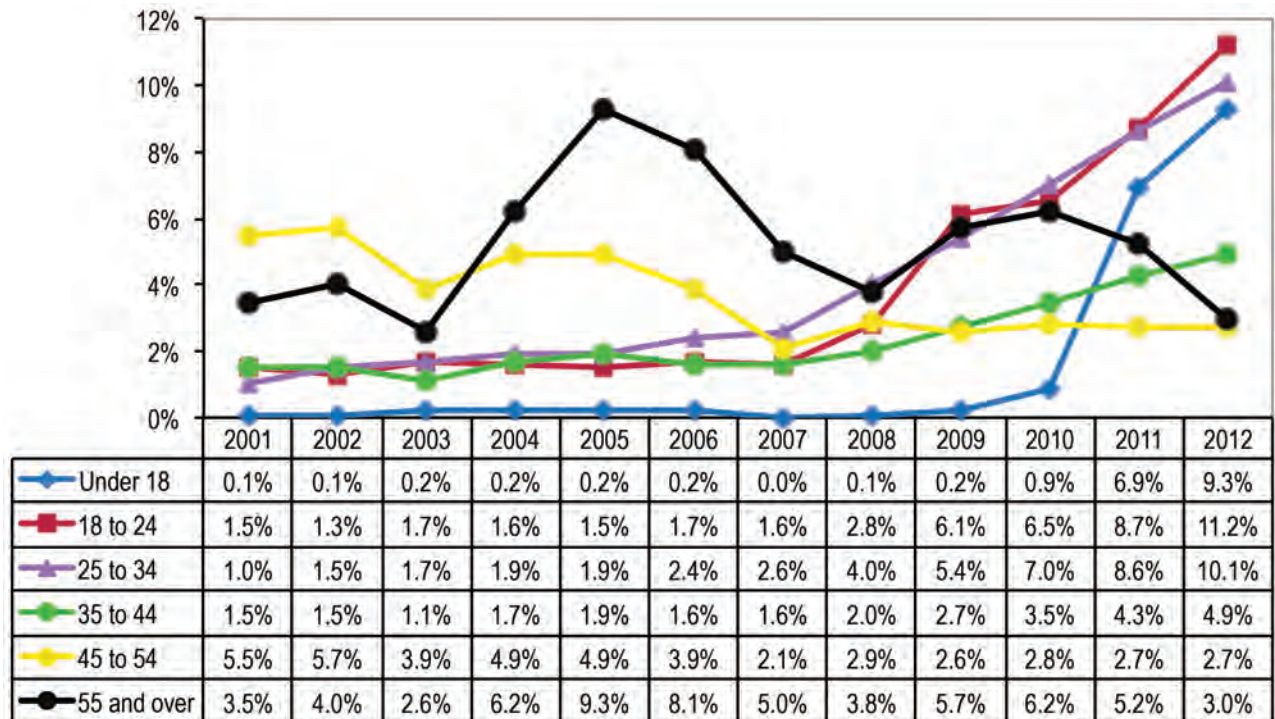
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 7.10 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2001–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 7.11 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2001–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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 2013, 364 new HIV infections and 90 new AIDS cases were reported in Indiana. As of December 31, 2013, a total of 11,087 persons were living with HIV disease⁵ in Indiana (Indiana State Department of Health, 2013). 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 2013 was 1.1 per 100,000 population (95% CI: 0.9–1.4), which was significantly lower than the U.S. rate of 2.1 per 100,000 population (95% CI: 2.0–2.1) (Centers for Disease Control and Prevention, 2015).⁶

Hepatitis

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

In 2012, 90 acute cases of hepatitis B and 110 acute cases of hepatitis C occurred in Indiana, representing rates of 1.4 for HBV (U.S.: 0.9) and 1.7 for HCV (U.S.: 0.6), per 100,000 population (Centers for Disease Control and Prevention, 2014a).

The 2013 age-adjusted mortality rate attributable to HBV and HCV⁷ 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, 2015).

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, 2012). According to the 2012 dataset, law enforcement made just under 1,600 arrests for possession and more than 1,500 arrests for sale/manufacture of opiates and cocaine in Indiana in that year. This represents arrest rates of 0.2 per 1,000 population (95% CI: 0.2–0.3) for possession and 0.2 per 1,000 population (95% CI: 0.2–0.3) for sale/manufacture. For trend information and comparisons with the United States, refer to Chapter 6, Cocaine, starting on page 97; for county-level data, see Maps 6.1 and 6.2 (pages 109 and 110) and Appendix 6C (pages 107–108).

⁵HIV disease includes both HIV infections and AIDS cases.

⁶Mortality rates for HIV/AIDS are based on ICD-10 codes B20–B24 (Human immunodeficiency virus [HIV] disease).

⁷Mortality 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, 2014)

	Treatment Episodes	Heroin Use		Heroin Dependence	
County	Total	Number	%	Number	%
Adams	151	6	4.0%	<5	N/A
Allen	1,717	104	6.1%	66	3.8%
Bartholomew	672	44	6.5%	22	3.3%
Benton	49	<5	N/A	<5	N/A
Blackford	58	8	13.8%	7	12.1%
Boone	227	46	20.3%	35	15.4%
Brown	91	18	19.8%	13	14.3%
Carroll	102	13	12.7%	7	6.9%
Cass	277	14	5.1%	8	2.9%
Clark	475	69	14.5%	60	12.6%
Clay	189	<5	N/A	<5	N/A
Clinton	201	18	9.0%	16	8.0%
Crawford	62	<5	N/A	<5	N/A
Daviess	151	<5	N/A	<5	N/A
Dearborn	508	135	26.6%	102	20.1%
Decatur	176	9	5.1%	5	2.8%
DeKalb	241	14	5.8%	7	2.9%
Delaware	1,037	122	11.8%	88	8.5%
Dubois	278	5	1.8%	<5	N/A
Elkhart	722	41	5.7%	35	4.8%
Fayette	216	59	27.3%	31	14.4%
Floyd	232	36	15.5%	32	13.8%
Fountain	57	10	17.5%	8	14.0%
Franklin	181	45	24.9%	29	16.0%
Fulton	217	5	2.3%	<5	N/A
Gibson	228	<5	N/A	<5	N/A
Grant	495	18	3.6%	15	3.0%
Greene	201	15	7.5%	8	4.0%
Hamilton	987	112	11.3%	95	9.6%
Hancock	207	27	13.0%	24	11.6%
Harrison	36	<5	N/A	<5	N/A
Hendricks	365	72	19.7%	65	17.8%
Henry	358	24	6.7%	17	4.7%
Howard	683	146	21.4%	110	16.1%
Huntington	97	6	6.2%	<5	N/A
Jackson	323	33	10.2%	10	3.1%
Jasper	111	40	36.0%	31	27.9%
Jay	98	16	16.3%	13	13.3%
Jefferson	380	42	11.1%	19	5.0%
Jennings	288	20	6.9%	11	3.8%
Johnson	239	50	20.9%	44	18.4%
Knox	309	<5	N/A	<5	N/A
Kosciusko	270	18	6.7%	12	4.4%
LaGrange	165	5	3.0%	<5	N/A
Lake	2,671	395	14.8%	340	12.7%
LaPorte	557	153	27.5%	123	22.1%
Lawrence	474	29	6.1%	21	4.4%

	Treatment Episodes	Heroin Use		Heroin Dependence	
County	Total	Number	%	Number	%
Madison	1,064	60	5.6%	47	4.4%
Marion	4,375	861	19.7%	713	16.3%
Marshall	255	23	9.0%	17	6.7%
Martin	51	<5	N/A	<5	N/A
Miami	305	18	5.9%	12	3.9%
Monroe	1,364	214	15.7%	121	8.9%
Montgomery	317	57	18.0%	36	11.4%
Morgan	477	80	16.8%	55	11.5%
Newton	38	13	34.2%	12	31.6%
Noble	220	<5	N/A	<5	N/A
Ohio	44	7	15.9%	5	11.4%
Orange	139	5	3.6%	<5	N/A
Owen	203	11	5.4%	6	3.0%
Parke	97	6	6.2%	<5	N/A
Perry	133	<5	N/A	<5	N/A
Pike	43	<5	N/A	<5	N/A
Porter	709	196	27.6%	181	25.5%
Posey	133	<5	N/A	<5	N/A
Pulaski	119	6	5.0%	<5	N/A
Putnam	229	11	4.8%	7	3.1%
Randolph	192	33	17.2%	14	7.3%
Ripley	249	44	17.7%	32	12.9%
Rush	160	11	6.9%	9	5.6%
Saint Joseph	1,543	201	13.0%	175	11.3%
Scott	130	10	7.7%	7	5.4%
Shelby	157	24	15.3%	15	9.6%
Spencer	169	<5	N/A	<5	N/A
Starke	247	53	21.5%	44	17.8%
Steuben	214	<5	N/A	<5	N/A
Sullivan	80	<5	N/A	<5	N/A
Switzerland	67	11	16.4%	6	9.0%
Tippecanoe	453	67	14.8%	54	11.9%
Tipton	65	9	13.8%	7	10.8%
Union	40	16	40.0%	13	32.5%
Vanderburgh	1,377	21	1.5%	12	0.9%
Vermillion	114	<5	N/A	<5	N/A
Vigo	729	9	1.2%	5	0.7%
Wabash	244	28	11.5%	15	6.1%
Warren	21	<5	N/A	<5	N/A
Warrick	328	<5	N/A	<5	N/A
Washington	95	18	18.9%	17	17.9%
Wayne	455	157	34.5%	101	22.2%
Wells	127	7	5.5%	<5	N/A
White	161	7	4.3%	5	3.1%
Whitley	104	6	5.8%	<5	N/A
County Info Missing	99	13	13.1%	10	10.1%
Indiana	35,764	4,393	12.3%	3,327	9.3%

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

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

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

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 7B

Percentage of Indiana Students Reporting Lifetime and Monthly Heroin Use in Indiana, by Region and Grade (Indiana Youth Survey, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.3	0.3	0.4	0.0	0.5	0.4	0.5	0.3	0.2
	Monthly	0.2	0.1	0.3	0.0	0.2	0.3	0.0	0.1	0.0
7th Grade	Lifetime	0.5	*0.7	0.3	0.4	0.3	0.5	0.3	*0.2	0.6
	Monthly	0.2	*0.5	0.1	0.4	0.1	0.2	0.1	0.1	0.3
8th Grade	Lifetime	0.7	0.9	0.7	0.8	0.4	0.7	0.3	0.7	0.7
	Monthly	0.3	0.4	0.3	0.0	0.4	0.3	0.0	0.3	0.2
9th Grade	Lifetime	1.0	1.2	1.2	0.8	0.6	1.0	0.8	0.6	1.2
	Monthly	0.5	0.6	0.8	0.0	0.6	0.4	0.3	0.2	0.6
10th Grade	Lifetime	1.2	1.4	0.9	0.0	1.3	1.0	1.5	*0.8	*1.6
	Monthly	0.5	0.7	0.4	0.0	0.4	0.5	0.7	0.4	0.7
11th Grade	Lifetime	1.5	1.7	1.5	1.7	1.3	1.6	2.0	*1.0	1.8
	Monthly	0.7	1.0	0.7	0.6	0.9	0.7	0.5	0.7	0.7
12th Grade	Lifetime	1.8	*2.5	1.9	1.3	1.8	1.3	1.3	1.6	1.9
	Monthly	0.7	1.1	0.7	0.0	0.8	0.5	1.0	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., 2014

REFERENCES, CHAPTER 7

- Centers for Disease Control and Prevention. (2015). *CDC WONDER underlying cause of death (compressed mortality)*. Retrieved from <http://wonder.cdc.gov/>
- Centers for Disease Control and Prevention. (2014a). *Surveillance for Viral Hepatitis – United States, 2012*. Retrieved from <http://www.cdc.gov/hepatitis/Statistics/2012Surveillance/index.htm>
- Centers for Disease Control and Prevention. (2014b). *Viral hepatitis integration for HIV prevention community planners*. Retrieved from http://www.cdc.gov/hepatitis/Resources/PDFs/hiv_comm_planners.pdf
- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., & Oi, S. E. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- King, R.A., & Jun, M.K. (2014). *Results of the Indiana College Substance Use Survey–2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Data received January 20, 2015, from Indiana Family and Social Services Administration.
- Indiana State Department of Health. (2013). *Spotlight on HIV/STD/viral hepatitis – December 2013*. Retrieved from <https://secure.in.gov/isdh/26274.htm>
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2012). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- National Institute on Drug Abuse. (2005). *Heroin: Abuse and addiction*. Retrieved from <http://www.drugabuse.gov/publications/research-reports/heroin-abuse-addiction>
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>
- Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *The DAWN Report: Highlights of the 2011 Drug Abuse Warning Network (DAWN) Findings on Drug-Related Emergency Department Visits*. Retrieved from <http://www.samhsa.gov/data/2k13/DAWN2k11ED/DAWN2k11ED.htm#high1>
- Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved <http://www.samhsa.gov/data/population-data-nsduh>
- The Kaiser Family Foundation. (2013). *Indiana: HIV/AIDS*. Data Source: Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention-Surveillance and Epidemiology. Retrieved from <http://kff.org/state-category/hiv/aids/>

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, 2014).

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, 2014). The latest prevalence estimates for the nation are based on results from the 2013 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.: 0.5%).
- 0.2% of Hoosiers (10,000 residents) used meth in the past month (U.S.: 0.2%) (Substance Abuse and Mental Health Services Administration, 2014).

Adult Consumption Patterns

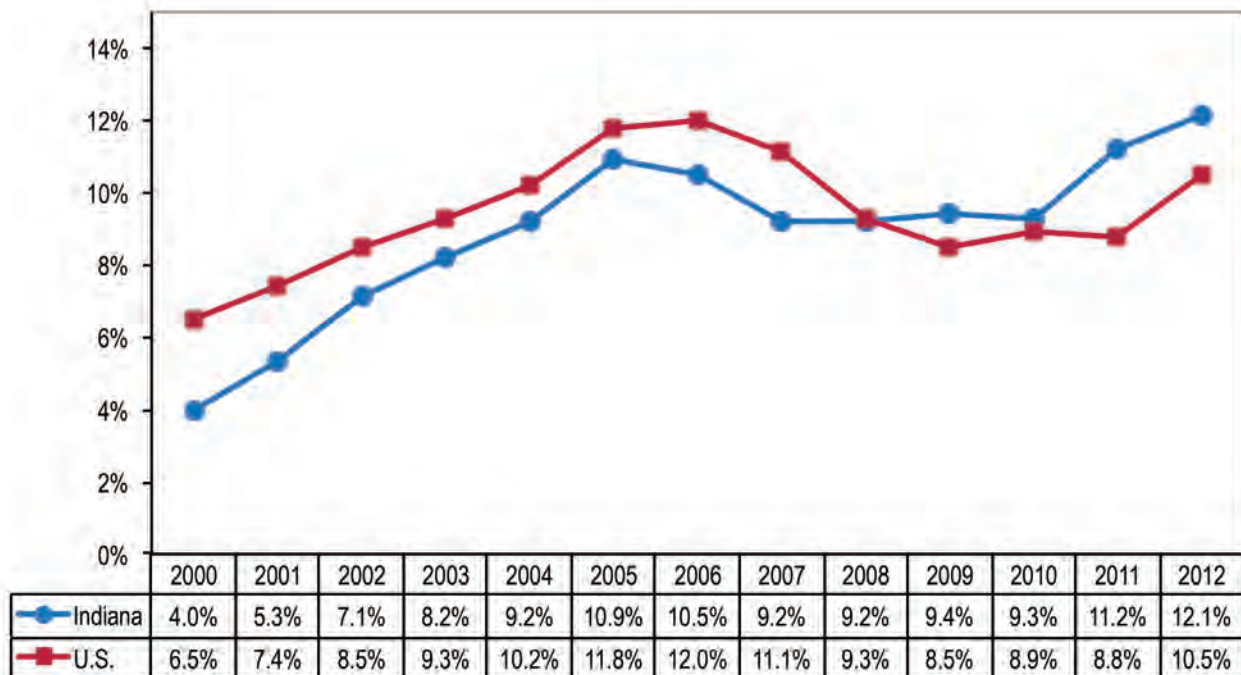
According to pooled NSDUH data from 2002 through 2005, 1.9% of Indiana residents ages 18 to 25 used meth in the past year. In comparison, the highest and lowest rates of past-year meth use among 18- to 25-year-olds were found in young adults from Wyoming (4.6%) and New York (0.3%), respectively (Substance 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 2014 results, 0.5% of Indiana college students had used meth in the past year (U.S.: 0.4%) and 0.2% had used it in the past month (U.S.: less than 0.05%); U.S. rates were not statistically different. Past-year use was statistically similar for males (0.7%) and females (0.4%), and current use was the same for both genders (0.2%). 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, 2014).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, 2012). Indiana TEDS data show an increase in the percentage of patients reporting meth use at admission, from 4.0% in 2000 to 12.1% in 2012. 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).

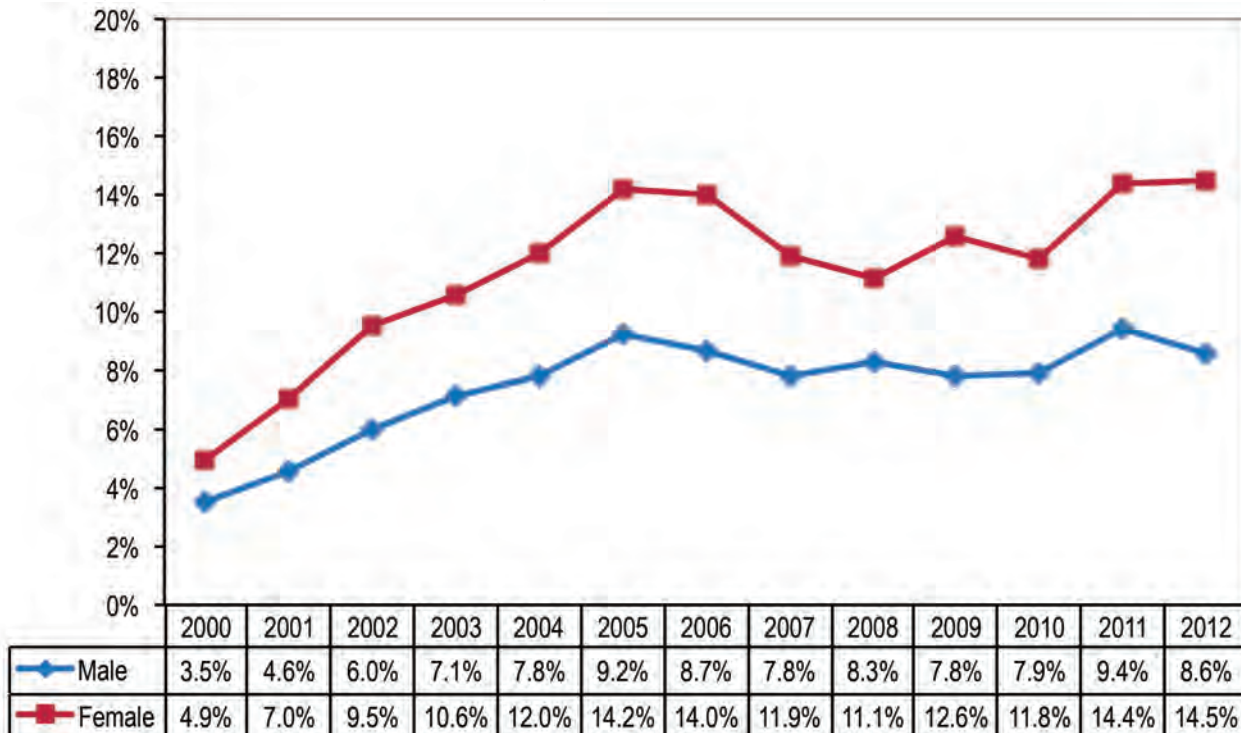
¹Twelve Indiana colleges participated in the 2014 survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

Figure 8.1 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana and the United States (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 8.2 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Gender (Treatment Episode Data Set, 2000–2012)



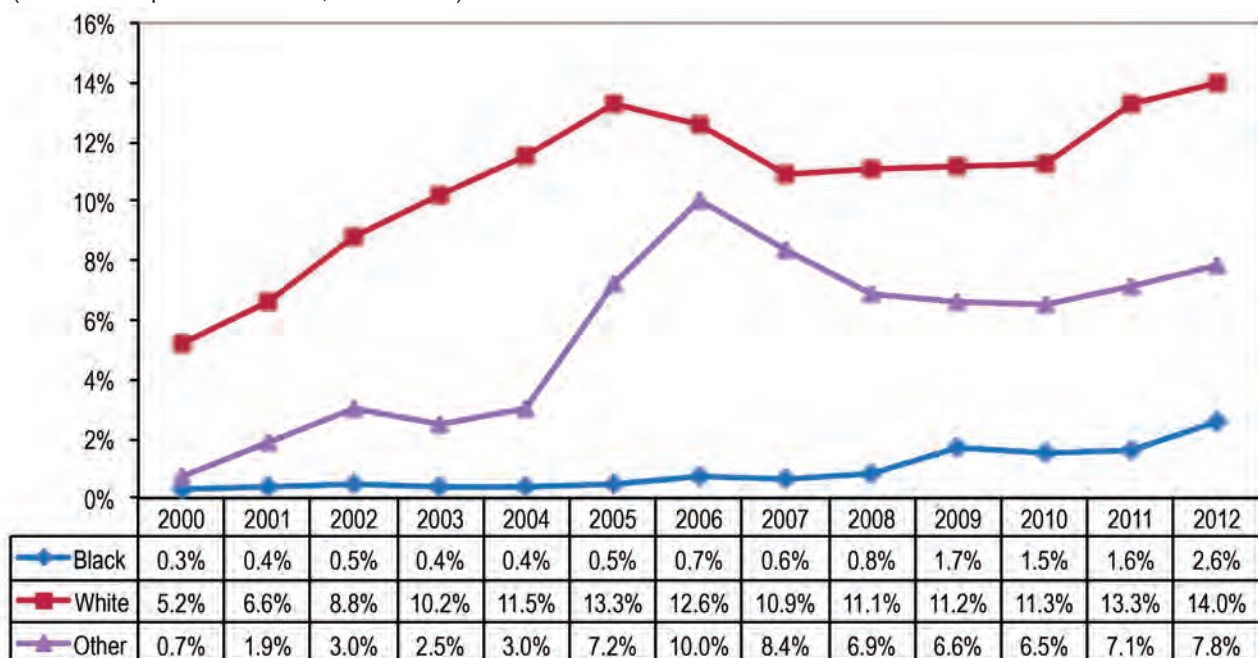
Source: Substance Abuse and Mental Health Data Archive, 2012

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 14.0% in 2012. Even though blacks consistently had the lowest percentage, reported use increased significantly from 0.3% to 2.6% during that time period; however, the greatest increase was found among other races, whose percentage rose more than tenfold from 0.7% to 7.8% (see Figure 8.3).
- **Age**—Adults ages 25 to 44 reported the highest percentage of meth use, significantly more than older or younger Hoosiers in treatment (see Figure 8.4) (Substance Abuse and Mental Health Data Archive, 2012).

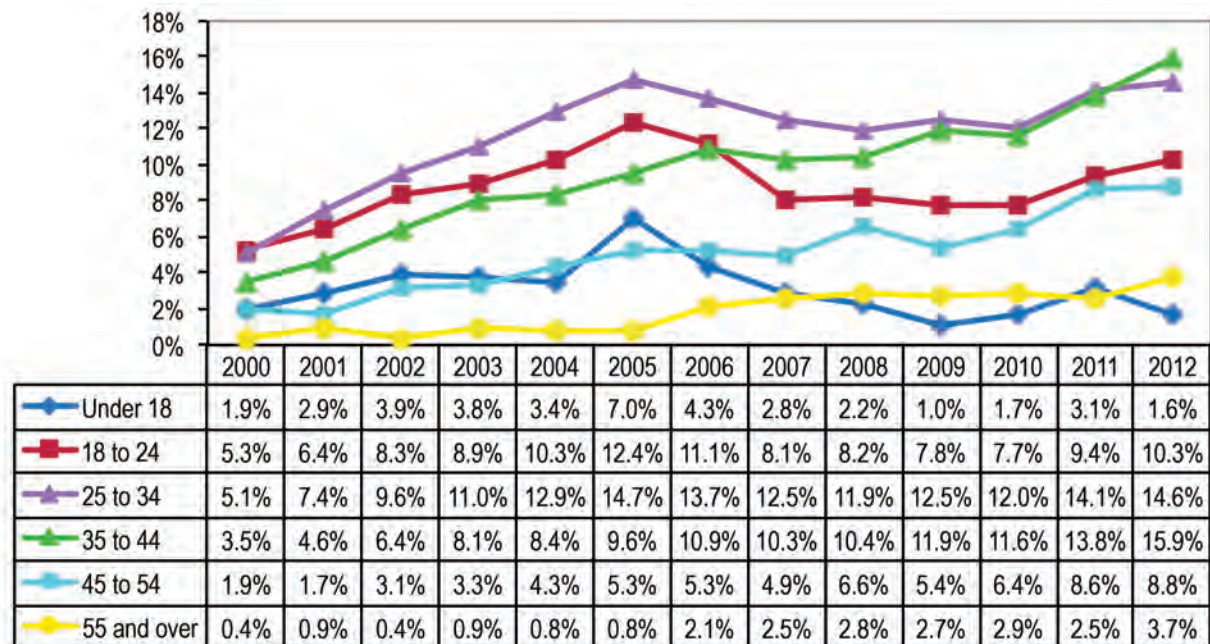
For county-level treatment data, see Appendix 8A, page 137.

Figure 8.3 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Race (Treatment Episode Data Set, 2000–2012)



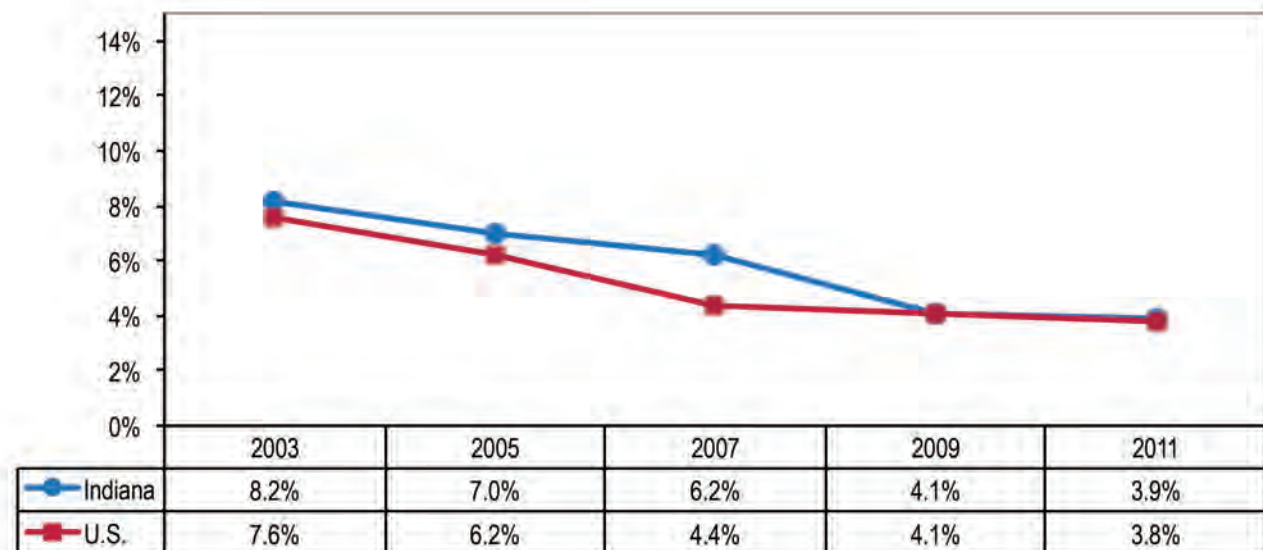
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 8.4 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Age Group (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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)



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 Indiana Youth Survey, conducted among Indiana students in grades 6 through 12 (Gassman, Jun, Samuel, Agle, Lee, Crane, Boyken, et al., 2014), 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, 2014).

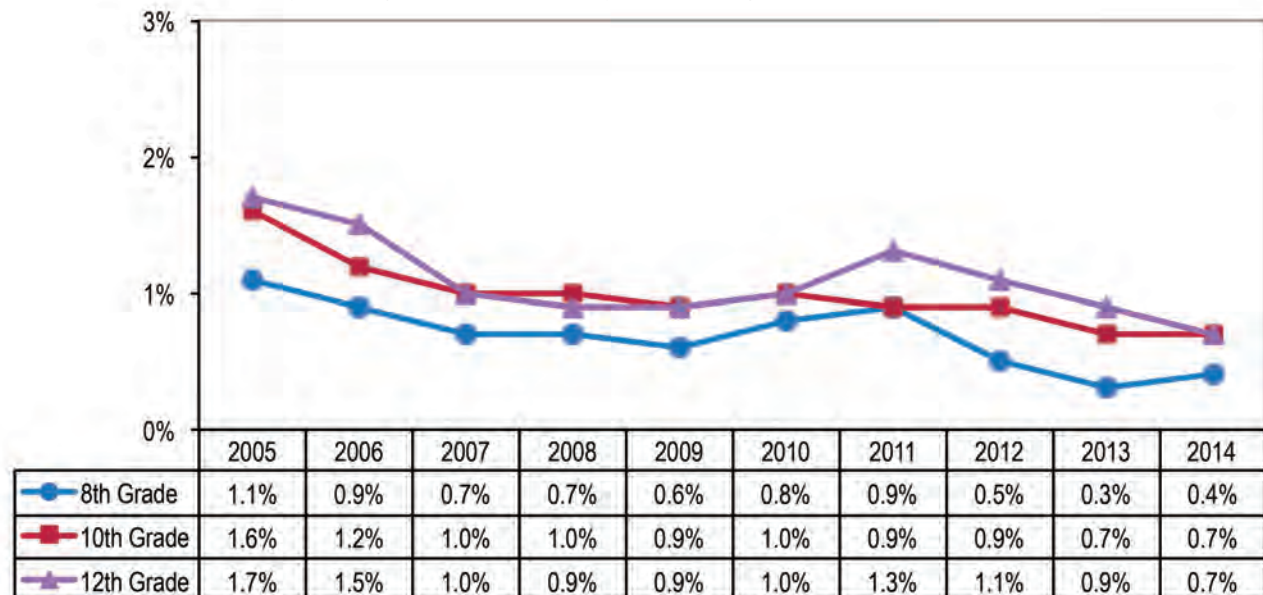
In Indiana, current (past month) rates of meth use in 8th, 10th, and 12th grade students seemed to have decreased from 2005 through 2014 (see Figure 8.6).

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 (Indiana Youth Survey, 2005–2014)

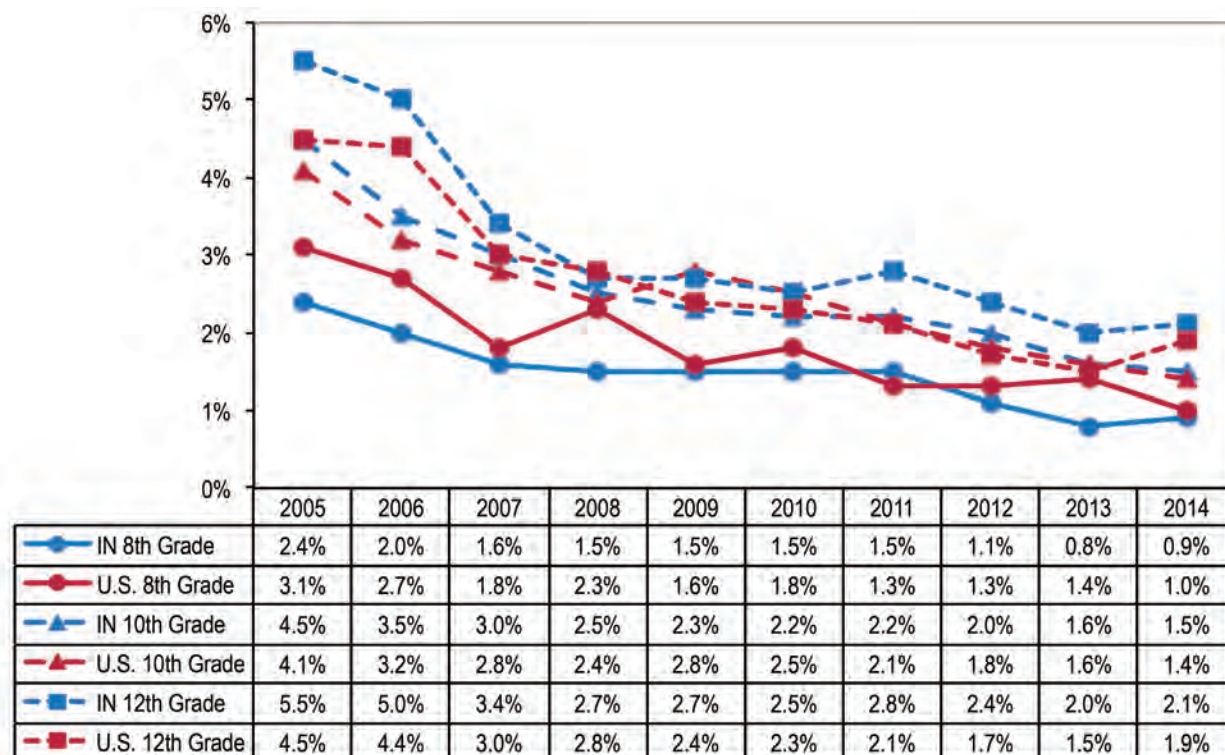


Source: Gassman, et al., 2014

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 138.

Figure 8.7 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Lifetime Methamphetamine Use (Indiana Youth Survey, 2005–2014)



Source: Gassman, et al., 2014; Inter-university Consortium for Political and Social Research, University of Michigan, 2014

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, 2014).

Meth labs and parental addiction pose serious risks to children, including chemical contamination; fires and explosions; and neglect and physical, emotional, and sexual abuse (Messina, Marinelli-Casey, West, & Rawson, 2007). Children living at meth labs may be exposed to highly toxic fumes generated during meth production or the secondhand smoke of adults who are using the drug. Low-level exposure to some of the meth ingredients may lead to headache, nausea, dizziness, and fatigue. At higher levels, exposure can produce shortness of breath, coughing, chest pain, dizziness, lack of coordination, eye and tissue irritation, chemical burns (to the skin, eyes, mouth, and nose), and even death (U.S. Department of Justice, Office of Justice Programs, 2003).

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 trend changed in 2011, with Indiana and U.S. percentages now being statistically similar (Substance Abuse and Mental Health Data Archive, 2012).

Between 2000 and 2012, the percentage of treatment admissions in Indiana in which meth dependence was indicated increased significantly from 1.5% to 6.5% (see Figure 8.8).

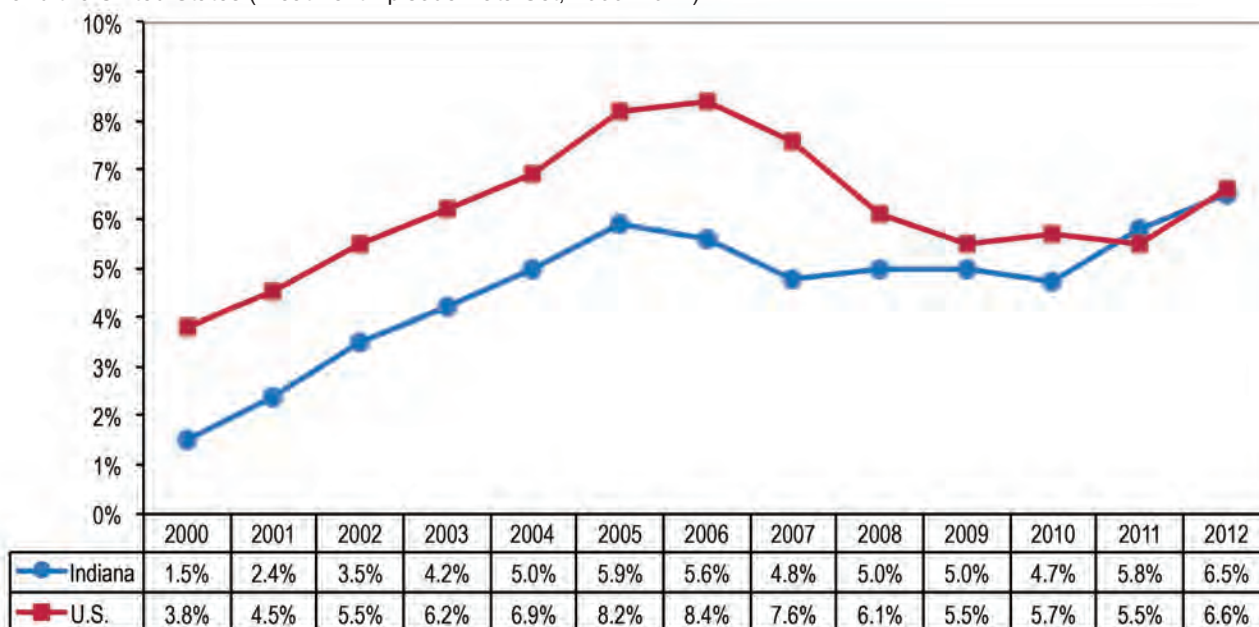
According to the 2012 TEDS dataset, methamphetamine dependence in Indiana's treatment

population differed significantly by gender, race, and age group, as follows ($P < 0.001$):

- **Gender**—More women (8.5%) than men (5.3%) 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 (7.7%) and black patients (1.0%), respectively (see Figure 8.10).
- **Age**—Meth dependence was indicated primarily among patients ages 25 to 44; Hoosiers under 18 (1.2%) and those ages 55 and older had the lowest percentages (1.2%) (see Figure 8.11) (Substance Abuse and Mental Health Data Archive, 2012).

For county-level treatment data, see Appendix 8A, page 137.

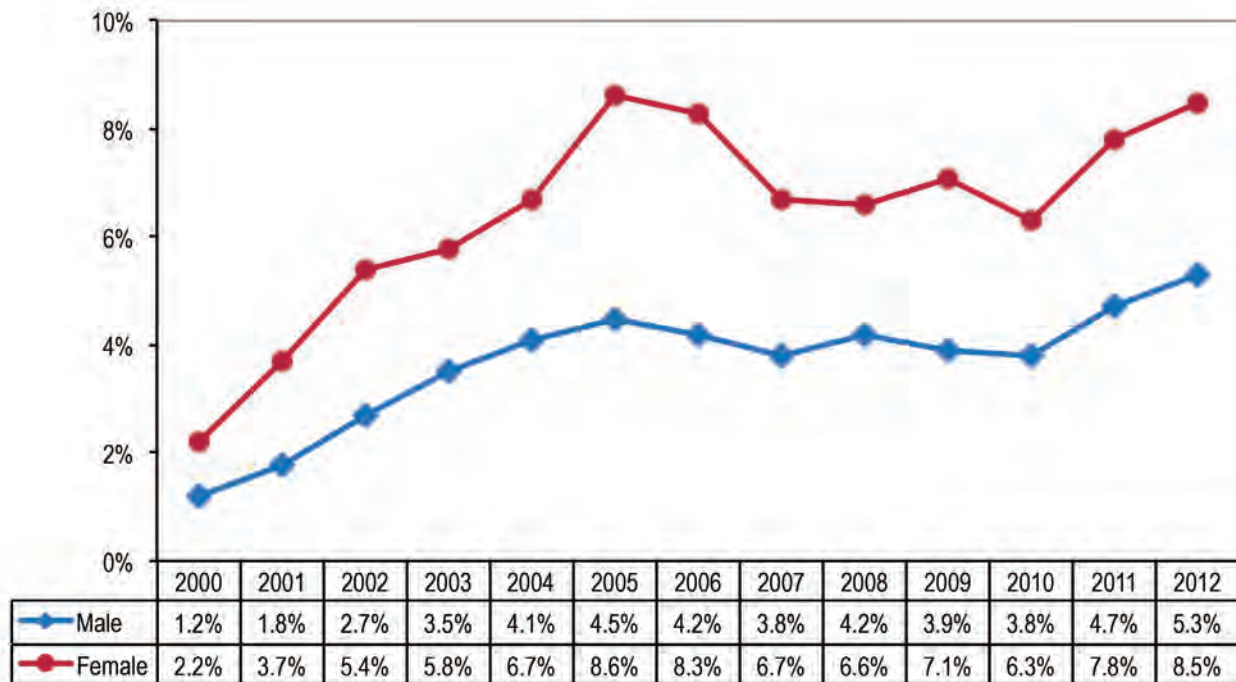
Figure 8.8 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana and the United States (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

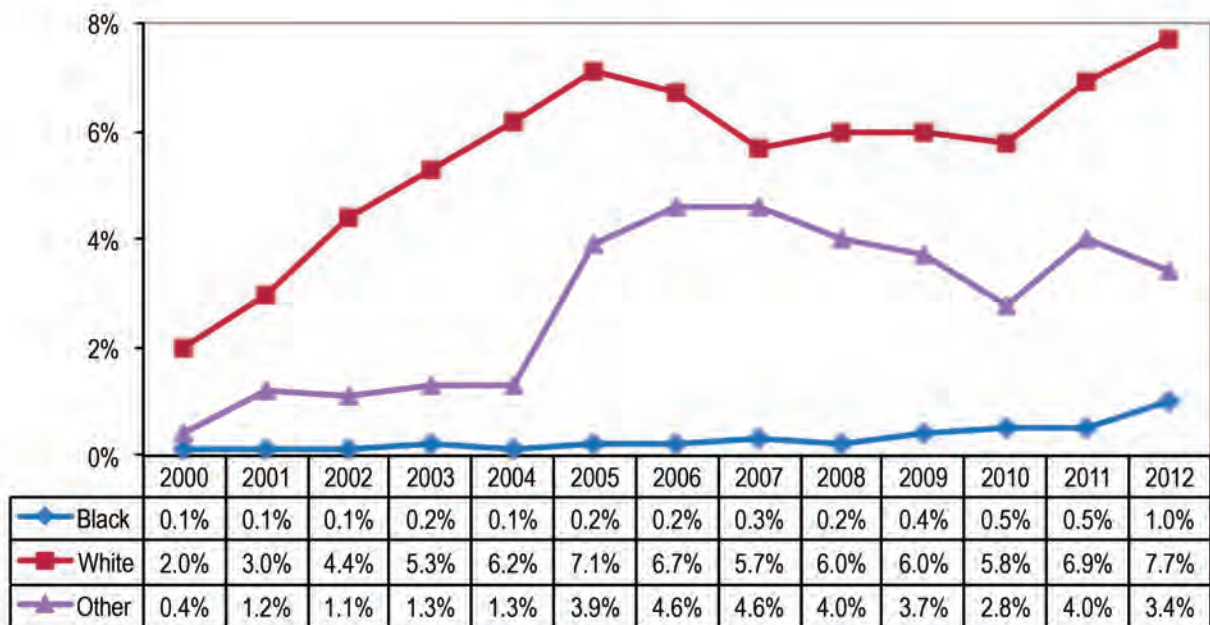
²We defined methamphetamine dependence as “individuals in substance abuse treatment listing methamphetamine as their primary substance at admission.”

Figure 8.9 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Gender (Treatment Episode Data Set, 2000–2012)



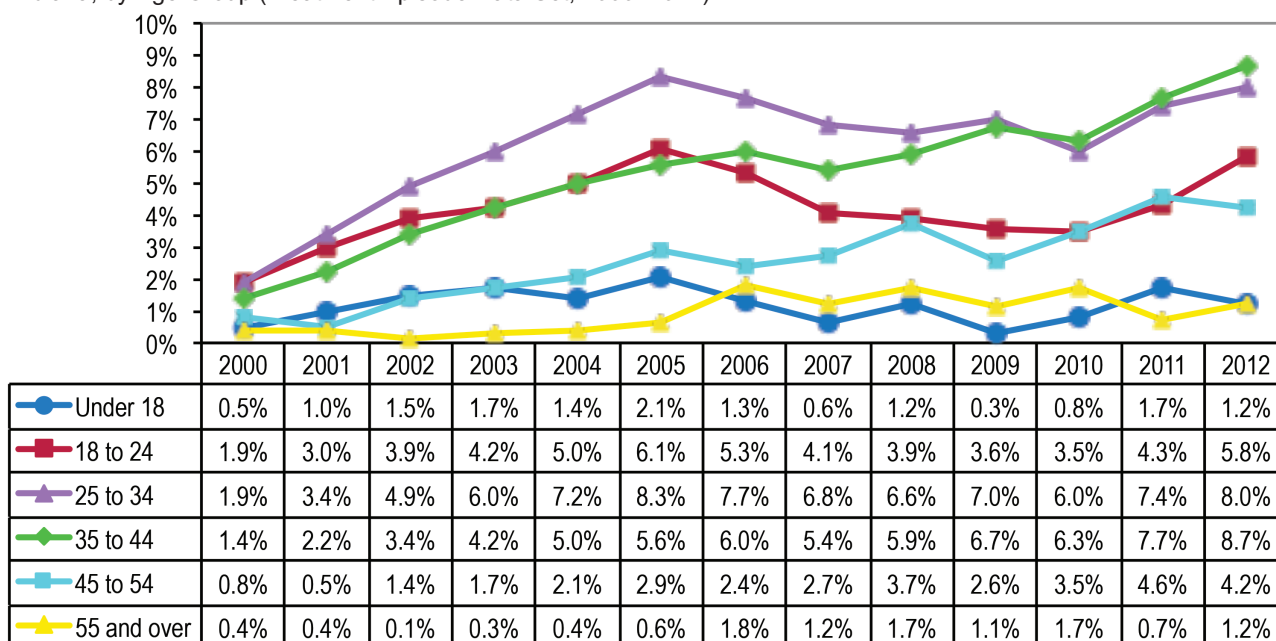
Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 8.10 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Race (Treatment Episode Data Set, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Figure 8.11 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Age Group (Treatment Episode Data Set, 2000–2012)



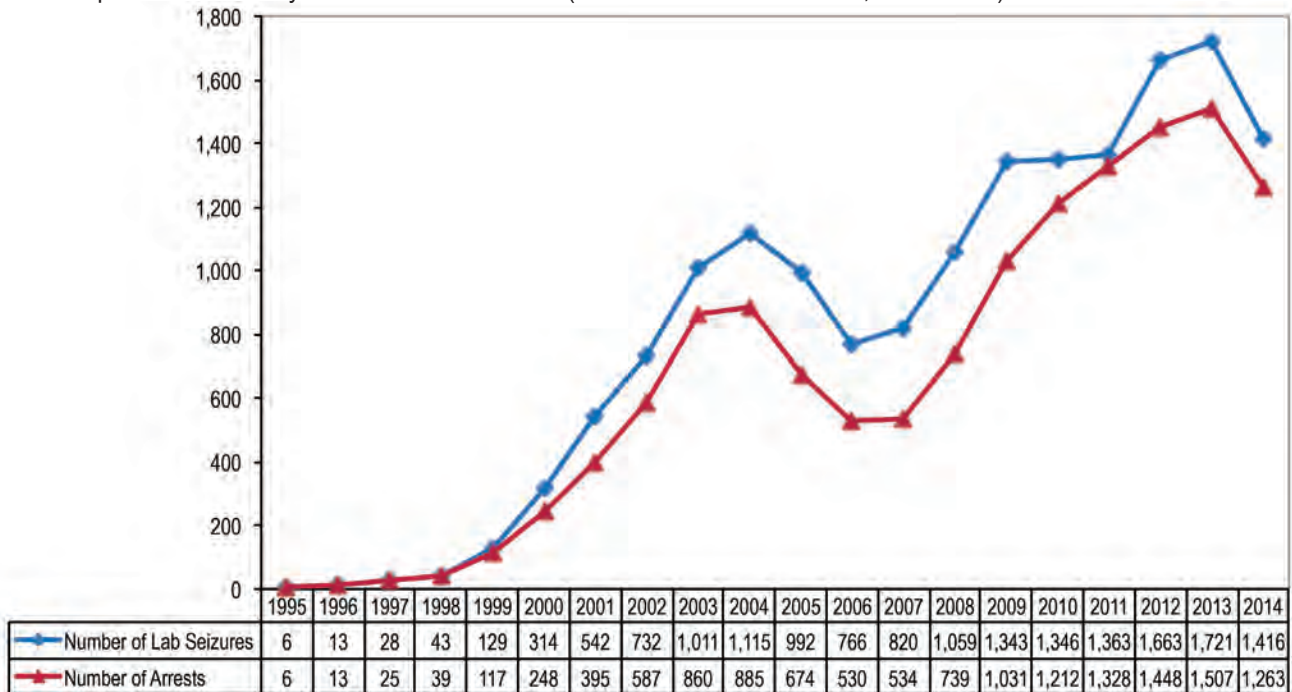
Source: Substance Abuse and Mental Health Data Archive, 2012

Criminal Consequences

From January 1 to December 31, 2014, the Indiana State Police (ISP) seized 1,416 clandestine methamphetamine labs and made 1,263 meth lab arrests in the state, which represents a decrease in both lab seizures and arrests from 2013 (see Figure 8.12) (Indiana State Police, 2015). 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.

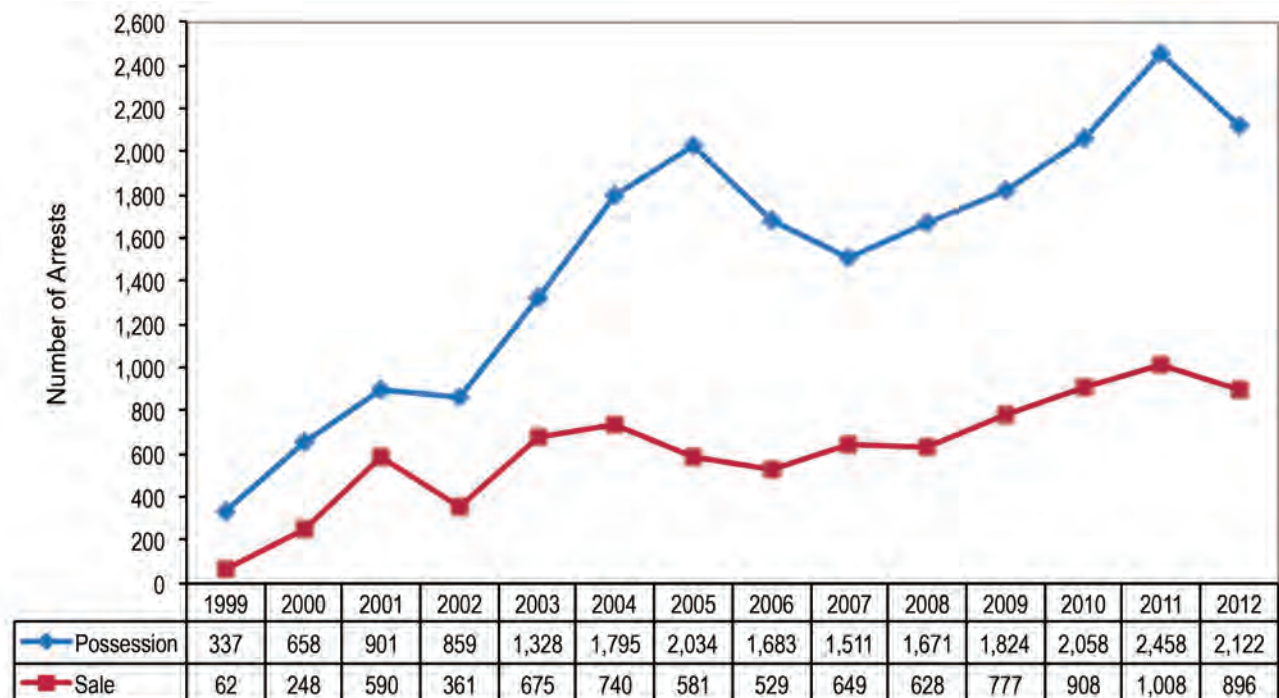
Waste is often disposed along roadsides, in discarded plastic bottles (Blostein, Plaisier, Maltz, Davidson, Wideman, Feucht, & VandenBerg, 2009; Greene, Williams, & Wright, 2010). The number of ISP’s meth lab seizures included all meth incidents, such as labs, “dump sites,” and “chemical and glassware” seizures. In 2014, over 1,200 seizures, i.e., 91% 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, 2015). Map 8.1 (page 141) shows the number of meth labs seized by ISP in each county in 2014.

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, 1995–2014)



Source: Indiana State Police, 2015

Figure 8.13 Number of Arrests for Synthetic Drug Possession and Sale/Manufacture in Indiana (Uniform Crime Reporting Program, 1999–2012)



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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, 2012). According to 2012 results, 2,122 Hoosiers were arrested for possession of synthetic drugs. This represents an arrest rate of 0.3 (95% CI: 0.3–0.3) per 1,000 population, a rate statistically higher than the nation’s, at 0.2 (95% CI: 0.2–0.2). Additionally, 896 arrests were made in Indiana for the sale and manufacture of synthetic drugs; Indiana’s arrest rate of 0.1 (95% CI: 0.1–0.1) per 1,000 population was the same as the U.S. rate of 0.1 (95% CI: 0.1–0.1) (see Figures 8.13 and 8.14).

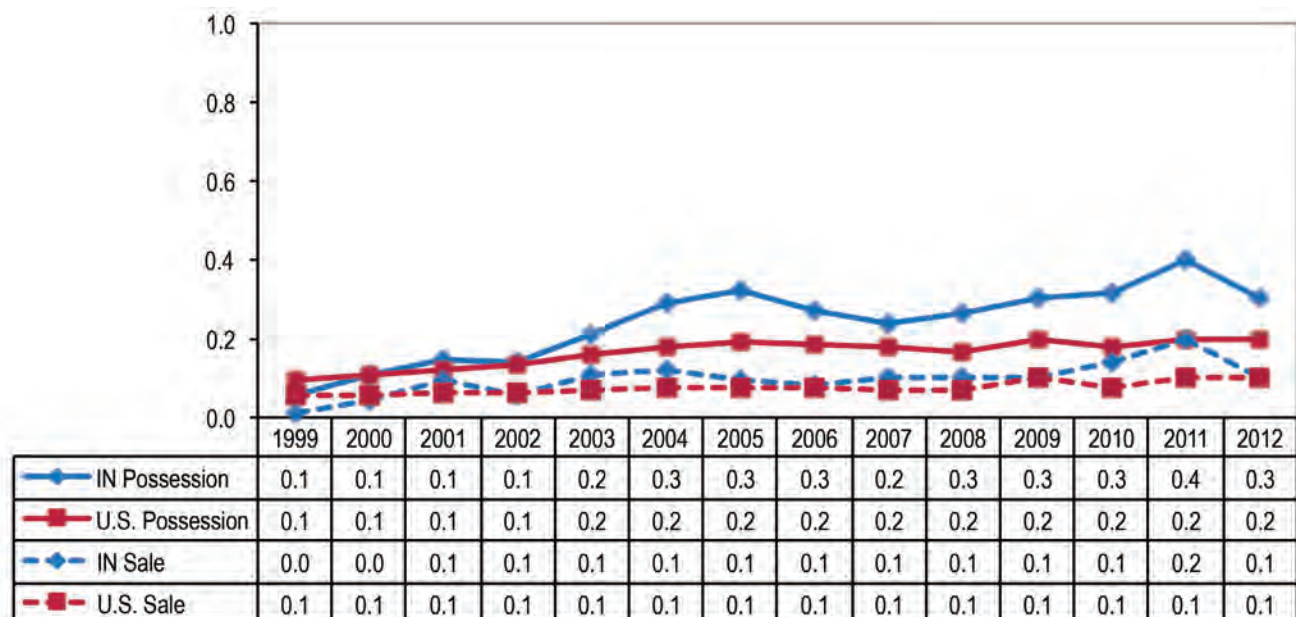
Maps 8.2 and 8.3 (pages 142 and 143), and Appendix 8C (pages 139–140) show arrest data for synthetic drug possession and sale/manufacture by county. Caution should be exercised when interpreting these data due to variations

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

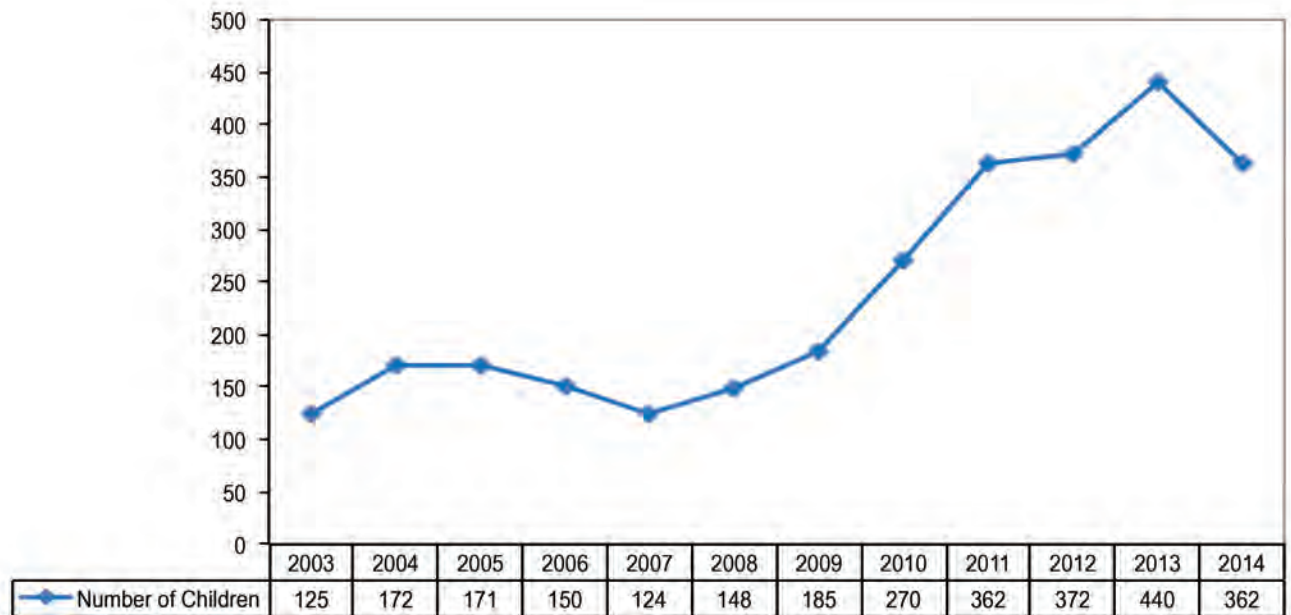
In addition to the consequences discussed above, meth use and abuse can have serious social impacts, affecting children and families in ways similar to other forms of substance abuse, such as contributing to increased interpersonal conflicts, financial problems, poor parenting, incarceration of parents, 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 a high of 440 in 2013 and declined to 362 in 2014 (see Figure 8.15) (Indiana State Police, 2015).

Figure 8.14 Arrest Rates for Synthetic Drug Possession and Sale/Manufacture per 1,000 Population, Indiana and United States (Uniform Crime Reporting Program, 1999–2012)



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Figure 8.15 Number of Indiana Children Taken by the Indiana State Police from Methamphetamine Lab Homes (Indiana Meth Lab Statistics, 2003–2014)



Source: Indiana State Police, 2015

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, 2014)

	Treatment Episodes	Meth Use		Meth Dependence	
County	Total	Number	%	Number	%
Adams	151	11	7.3	<5	NA
Allen	1717	106	6.2	54	3.1
Bartholomew	672	271	40.3	236	35.1
Benton	49	<5	NA	<5	NA
Blackford	58	<5	NA	<5	NA
Boone	227	14	6.2	6	2.6
Brown	91	21	23.1	17	18.7
Carroll	102	17	16.7	8	7.8
Cass	277	52	18.8	23	8.3
Clark	475	27	5.7	21	4.4
Clay	189	66	34.9	35	18.5
Clinton	201	16	8.0	7	3.5
Crawford	62	21	33.9	10	16.1
Daviess	151	50	33.1	27	17.9
Dearborn	508	17	3.3	<5	NA
Decatur	176	37	21.0	32	18.2
DeKalb	241	64	26.6	42	17.4
Delaware	1037	124	12.0	64	6.2
Dubois	278	50	18.0	21	7.6
Elkhart	722	98	13.6	62	8.6
Fayette	216	13	6.0	10	4.6
Floyd	232	22	9.5	22	9.5
Fountain	57	5	8.8	<5	NA
Franklin	181	12	6.6	6	3.3
Fulton	217	68	31.3	41	18.9
Gibson	228	68	29.8	33	14.5
Grant	495	25	5.1	15	3.0
Greene	201	52	25.9	26	12.9
Hamilton	987	15	1.5	6	0.6
Hancock	207	7	3.4	<5	NA
Harrison	36	5	13.9	<5	NA
Hendricks	365	31	8.5	22	6.0
Henry	358	19	5.3	12	3.4
Howard	683	96	14.1	37	5.4
Huntington	97	9	9.3	5	5.2
Jackson	323	144	44.6	123	38.1
Jasper	111	17	15.3	6	5.4
Jay	98	17	17.3	7	7.1
Jefferson	380	82	21.6	63	16.6
Jennings	288	110	38.2	99	34.4
Johnson	239	39	16.3	29	12.1
Knox	309	107	34.6	76	24.6
Kosciusko	270	40	14.8	19	7.0
LaGrange	165	58	35.2	23	13.9
Lake	2671	29	1.1	13	0.5
LaPorte	557	15	2.7	6	1.1
Lawrence	474	109	23.0	78	16.5

	Treatment Episodes	Meth Use		Meth Dependence	
County	Total	Number	%	Number	%
Madison	1064	80	7.5	42	3.9
Marion	4375	185	4.2	84	1.9
Marshall	255	43	16.9	26	10.2
Martin	51	23	45.1	16	31.4
Miami	305	69	22.6	31	10.2
Monroe	1364	204	15.0	135	9.9
Montgomery	317	60	18.9	28	8.8
Morgan	477	154	32.3	120	25.2
Newton	38	7	18.4	<5	NA
Noble	220	80	36.4	49	22.3
Ohio	44	<5	2.3	<5	NA
Orange	139	27	19.4	15	10.8
Owen	203	43	21.2	34	16.7
Parke	97	16	16.5	12	12.4
Perry	133	42	31.6	16	12.0
Pike	43	10	23.3	7	16.3
Porter	709	14	2.0	5	0.7
Posey	133	37	27.8	26	19.5
Pulaski	119	18	15.1	6	5.0
Putnam	229	69	30.1	45	19.7
Randolph	192	11	5.7	8	4.2
Ripley	249	23	9.2	16	6.4
Rush	160	24	15.0	22	13.8
Saint Joseph	1543	152	9.9	61	4.0
Scott	130	25	19.2	21	16.2
Shelby	157	27	17.2	13	8.3
Spencer	169	69	40.8	34	20.1
Starke	247	75	30.4	38	15.4
Steuben	214	70	32.7	50	23.4
Sullivan	80	30	37.5	13	16.3
Switzerland	67	<5	NA	<5	NA
Tippecanoe	453	61	13.5	28	6.2
Tipton	65	9	13.8	4	6.2
Union	40	<5	NA	<5	NA
Vanderburgh	1377	372	27.0	221	16.0
Vermillion	114	33	28.9	22	19.3
Vigo	729	281	38.5	152	20.9
Wabash	244	33	13.5	20	8.2
Warren	21	5	23.8	<5	NA
Warrick	328	107	32.6	63	19.2
Washington	95	11	11.6	9	9.5
Wayne	455	12	2.6	7	1.5
Wells	127	22	17.3	5	3.9
White	161	35	21.7	21	13.0
Whitley	104	18	17.3	10	9.6
County Info Missing	99	17	17.2	6	6.1
Indiana	35,764	4,992	14.0	3,006	8.4

Note: We defined methamphetamine dependence as “individuals in substance abuse treatment listing methamphetamine as their primary substance at admission.”

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

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

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 8B

Percentage of Indiana Students Reporting Lifetime and Monthly Methamphetamine Use, by Region and Grade
(Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.4	0.3	0.6	0.0	0.5	0.6	0.3	0.3	0.2
	Monthly	0.2	0.2	0.3	0.0	0.3	*0.4	0.3	0.1	0.2
7th Grade	Lifetime	0.5	0.7	0.3	0.7	0.5	0.6	0.1	0.5	0.3
	Monthly	0.3	*0.5	0.2	0.7	0.1	0.3	0.1	0.2	0.1
8th Grade	Lifetime	0.9	0.9	1.0	1.0	0.8	0.8	1.0	0.8	1.2
	Monthly	0.4	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.5
9th Grade	Lifetime	1.2	1.1	1.4	0.6	1.0	1.0	1.1	0.9	*1.8
	Monthly	0.5	0.5	*1.0	0.0	0.5	0.3	0.3	0.3	0.7
10th Grade	Lifetime	1.5	1.7	*0.9	0.5	2.1	*1.0	1.8	1.2	*2.3
	Monthly	0.7	0.9	0.4	0.0	0.6	0.6	0.9	0.5	*1.0
11th Grade	Lifetime	1.9	2.0	*1.2	1.1	2.0	2.0	1.9	1.9	2.4
	Monthly	0.7	0.9	0.6	0.6	0.8	0.5	0.6	1.0	0.7
12th Grade	Lifetime	2.1	2.1	1.9	3.2	1.6	1.6	3.3	1.9	2.5
	Monthly	0.7	0.8	0.7	0.6	0.6	0.5	0.8	0.8	1.1

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

Source: Gassman, et al., 2014

APPENDIX 8C

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

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	14	*0.4	6	*0.2
Allen	0	*0.0	0	*0.0
Bartholomew	110	1.4	8	*0.1
Benton	2	*0.2	1	*0.1
Blackford	19	*1.5	12	*1.0
Boone	7	*0.1	3	*0.1
Brown	6	*0.4	7	*0.5
Carroll	2	*0.1	0	*0.0
Cass	4	*0.1	0	*0.0
Clark	201	1.8	33	0.3
Clay	13	*0.5	8	*0.3
Clinton	1	*0.0	2	*0.1
Crawford	6	*0.6	2	*0.2
Daviess	29	0.9	16	*0.5
Dearborn	1	*0.0	3	*0.1
Decatur	13	*0.5	6	*0.2
DeKalb	15	*0.4	22	0.5
Delaware	63	0.5	0	*0.0
Dubois	31	0.7	9	*0.2
Elkhart	17	*0.1	8	*0.0
Fayette	10	*0.4	5	*0.2
Floyd	23	0.3	2	*0.0
Fountain	10	*0.6	5	*0.3
Franklin	0	*0.0	0	*0.0
Fulton	10	*0.5	4	*0.2
Gibson	34	1.0	19	*0.6
Grant	23	0.3	5	*0.1
Greene	12	*0.4	17	*0.5
Hamilton	88	0.3	10	*0.0
Hancock	22	0.3	9	*0.1
Harrison	7	*0.2	4	*0.1
Hendricks	56	0.4	16	*0.1
Henry	0	*0.0	0	*0.0
Howard	1	*0.0	6	*0.1
Huntington	0	*0.0	0	*0.0
Jackson	17	*0.4	6	*0.1
Jasper	7	*0.2	10	*0.3
Jay	24	1.1	20	0.9
Jefferson	13	*0.4	7	*0.2
Jennings	0	*0.0	0	*0.0
Johnson	8	*0.1	2	*0.0
Knox	28	0.7	9	*0.2
Kosciusko	34	0.4	23	0.3
LaGrange	7	*0.2	2	*0.1
Lake	42	0.1	13	*0.0
LaPorte	19	*0.2	3	*0.0
Lawrence	20	0.4	10	*0.2
Madison	10	*0.1	15	*0.1
Marion	176	0.2	49	0.1

(continued on next page)

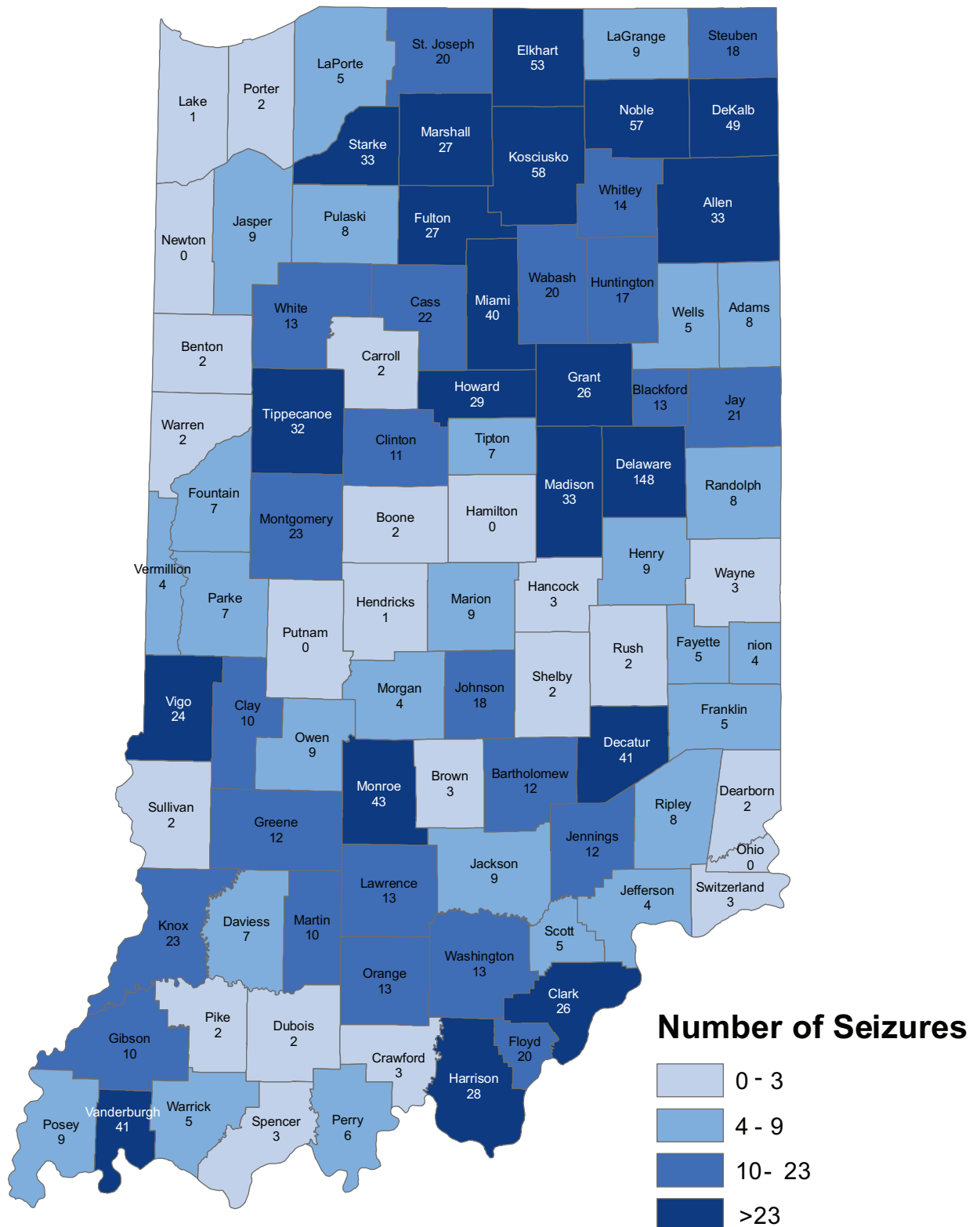
APPENDIX 8C (Continued from previous page)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	64	1.4	8	*0.2
Martin	16	*1.5	2	*0.2
Miami	4	*0.1	16	*0.4
Monroe	16	*0.1	17	*0.1
Montgomery	9	*0.2	6	*0.2
Morgan	12	*0.2	6	*0.1
Newton	2	*0.1	0	*0.0
Noble	31	0.6	11	*0.2
Ohio	1	*0.2	1	*0.2
Orange	39	1.9	14	*0.7
Owen	5	*0.2	2	*0.1
Parke	23	1.3	19	*1.1
Perry	18	*0.9	6	*0.3
Pike	5	*0.4	3	*0.2
Porter	12	*0.1	2	*0.0
Posey	11	*0.4	3	*0.1
Pulaski	11	*0.8	2	*0.1
Putnam	20	0.5	16	*0.4
Randolph	5	*0.2	1	*0.0
Ripley	11	*0.4	6	*0.2
Rush	2	*0.1	0	*0.0
Saint Joseph	70	0.3	2	*0.0
Scott	28	1.2	6	*0.2
Shelby	8	*0.2	6	*0.1
Spencer	9	*0.4	5	*0.2
Starke	13	*0.6	14	*0.9
Steuben	1	*0.0	6	*0.2
Sullivan	3	*0.1	1	*0.0
Switzerland	4	*0.4	3	*0.3
Tippecanoe	142	0.8	29	0.2
Tipton	13	*0.8	14	*0.9
Union	2	*0.3	1	*0.1
Vanderburgh	76	0.4	99	0.5
Vermillion	0	*0.0	0	*0.0
Vigo	61	0.6	81	0.7
Wabash	11	*0.3	6	*0.2
Warren	3	*0.4	2	*0.2
Warrick	70	1.2	54	0.9
Washington	5	*0.2	3	*0.1
Wayne	13	*0.2	3	*0.0
Wells	0	*0.0	0	*0.0
White	6	*0.2	1	*0.0
Whitley	12	*0.4	3	*0.1
Indiana	2,122	0.3	896	0.1

*Rates based on arrest numbers lower than 20 are unreliable.

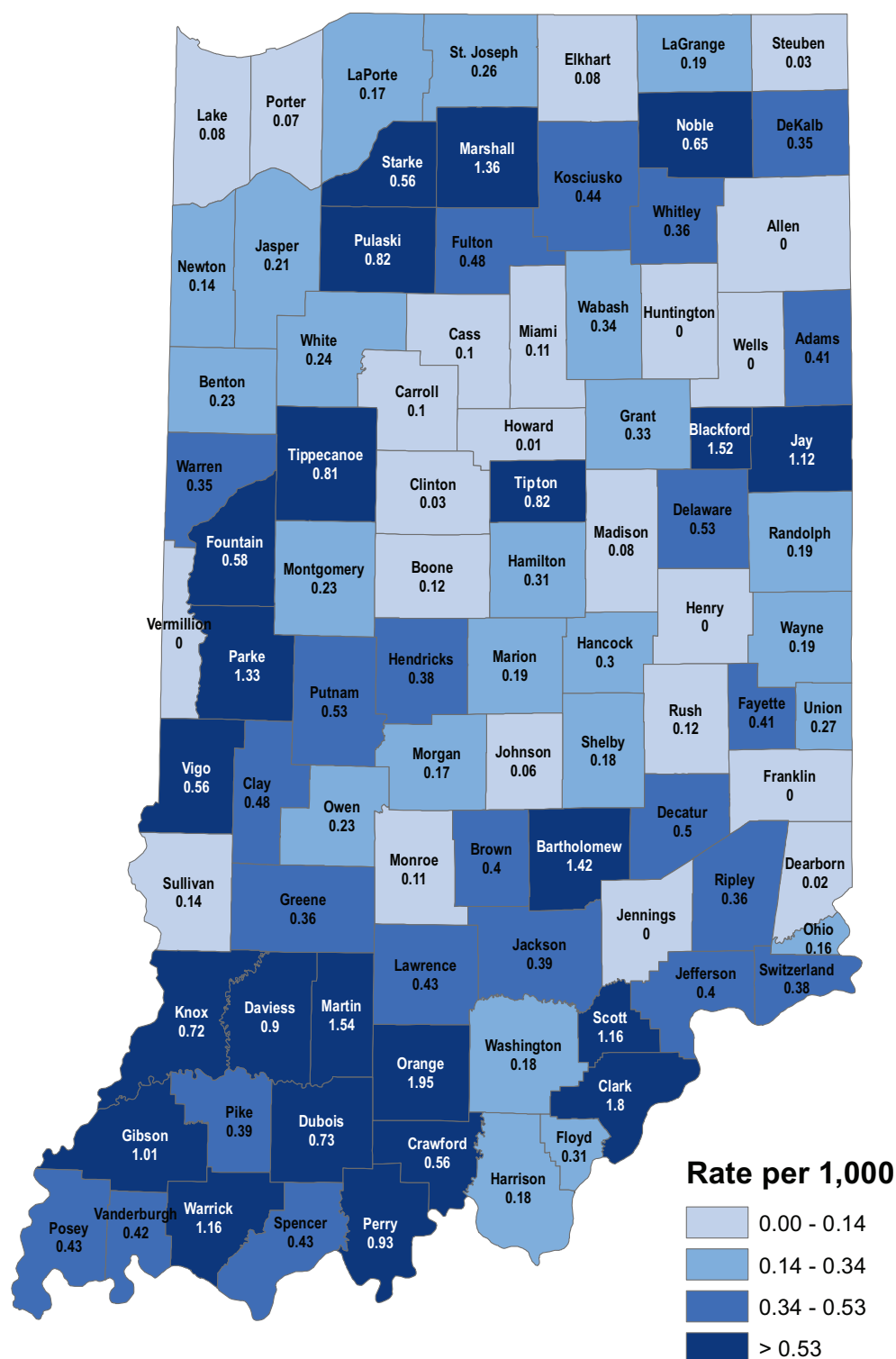
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Map 8.1 Number of Clandestine Methamphetamine Labs Seized by the Indiana State Police in Indiana, by County, (Indiana Lab Statistics, 2014)



Source: Indiana State Police, 2015

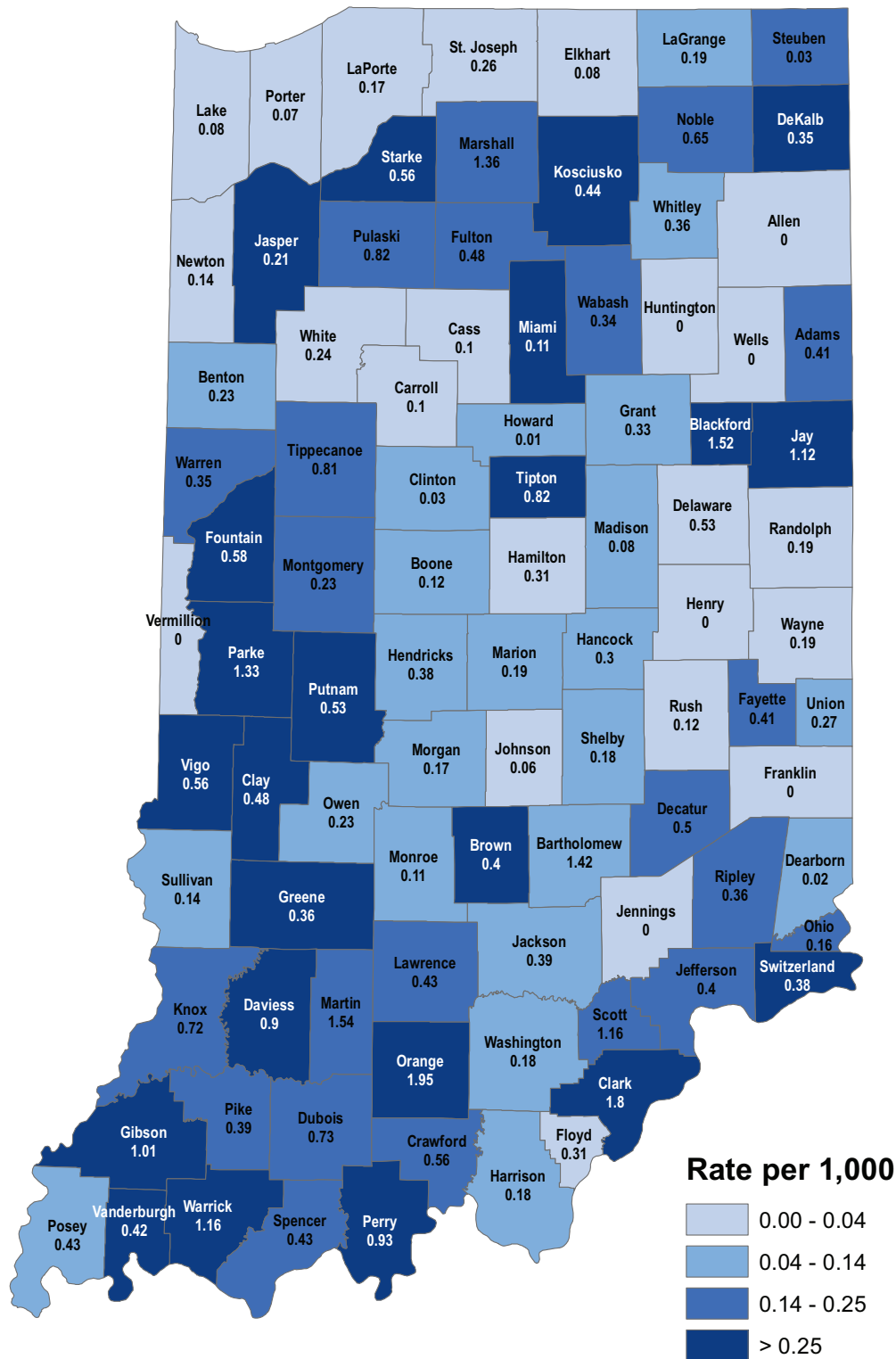
Map 8.2 Arrest Rates for Synthetic Drug Possession, per 1,000 Population, in Indiana, by County (Uniform Crime Reporting Program, 2012)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 8C (pages 139–140) for additional information.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Map 8.3 Arrest Rates for Synthetic Drug Sale/Manufacture, per 1,000 Population, in Indiana, by County (Uniform Crime Reporting Program, 2012)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 8C (pages 139–140) for additional information.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

REFERENCES, CHAPTER 8

- Blostein, P., Plaisier, B. R., Maltz, S. B., Davidson, S. B., Wideman, E. W., Feucht, E. C., & VandenBerg, S. L. (2009). Methamphetamine production is hazardous to your health. *The Journal of Trauma*, 66(6), 1712.
- Centers for Disease Control and Prevention. (1991-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Gassman, R., Jun, M. C., Samuel, S., Agley, J. D., Lee, J., Crane, M. K., Boyken, J., Oi, S. E., Pardue, S. E., Smith, J. N., & Stigger, C. K. (2014). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents*. Bloomington, IN: Indiana Prevention Resource Center.
- Greene, M. S., Williams, M. J., & Wright, E. R. (2010). *What's cooking? Meth use in Indiana*. Indianapolis, IN: Center for Health Policy, Department of Public Health, Indiana University School of Medicine.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Indianapolis, IN: Indiana Family and Social Services Administration.
- Indiana State Police. (2015). *Final 2014 ISP lab stats*. Received January 22, 2015, from Niki Crawford, First Sergeant Commander, Methamphetamine Suppression Section, in an e-mail to the Center for Health Policy, Indiana University Richard M. Fairbanks School of Public Health at IUPUI.
- Inter-university Consortium for Political and Social Research, University of Michigan. (2014). *Monitoring the Future*. Retrieved from <http://www.monitoringthefuture.org/data/data.html>
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Monitoring the Future national survey results on drug use, 1975–2010: Volume II, College students and adults ages 19-50*. Ann Arbor: Institute for Social Research, University of Michigan.
- King, R. A., & Jun, M. K. (2014). *Results of the Indiana College Substance Use Survey—2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- Messina, N., Marinelli-Casey, P., West, K., & Rawson, R. (2007). Children exposed to methamphetamine use and manufacture. *Child Abuse & Neglect*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3029499/>
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2011). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- National Institute on Drug Abuse. (2014). *NIDA DrugFacts: Methamphetamine*. Retrieved from <http://www.drugabuse.gov/publications/drugfacts/methamphetamine>
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>
- Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh>
- Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2008). *The NSDUH Report: State estimates of past year methamphetamine use*. Retrieved from <http://oas.samhsa.gov/2k6/stateMeth/stateMeth.htm>
- U.S. Department of Justice, Office of Justice Programs. (2003). *Dangers to children living at meth labs*. Retrieved from <http://ojp.gov/ovc/publications/bulletins/children/pg5.html>

PREScription DRUG ABUSE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

Abuse of prescription drugs¹ is a serious and growing public health problem in the United States. According to the National Survey on Drug Use and Health (NSDUH), in 2013, over 53 million Americans (20.3%) ages 12 years and older reported nonmedical use² 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, 2014). The National Institute on Drug Abuse (NIDA) lists the three most commonly abused types of prescription medicine as:

- *Opioids*, which are primarily prescribed to treat pain—examples include oxycodone (e.g., OxyContin®, Percocet®), hydrocodone (e.g., Vicodin®), codeine, and morphine;
- *Central nervous system (CNS) depressants*, such as sedatives and tranquilizers to treat sleep and anxiety disorders—examples include barbiturates (e.g., Mebaral®, Nembutal®) and benzodiazepines (e.g., Valium®, Xanax®); and
- *Stimulants*, which are often prescribed to treat narcolepsy and attention-deficit hyperactivity disorder (ADHD)—examples include dextroamphetamine (Dexedrine® and Adderall®) and methylphenidate (Ritalin® and Concerta®) (National Institute on Drug Abuse, 2014).

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).

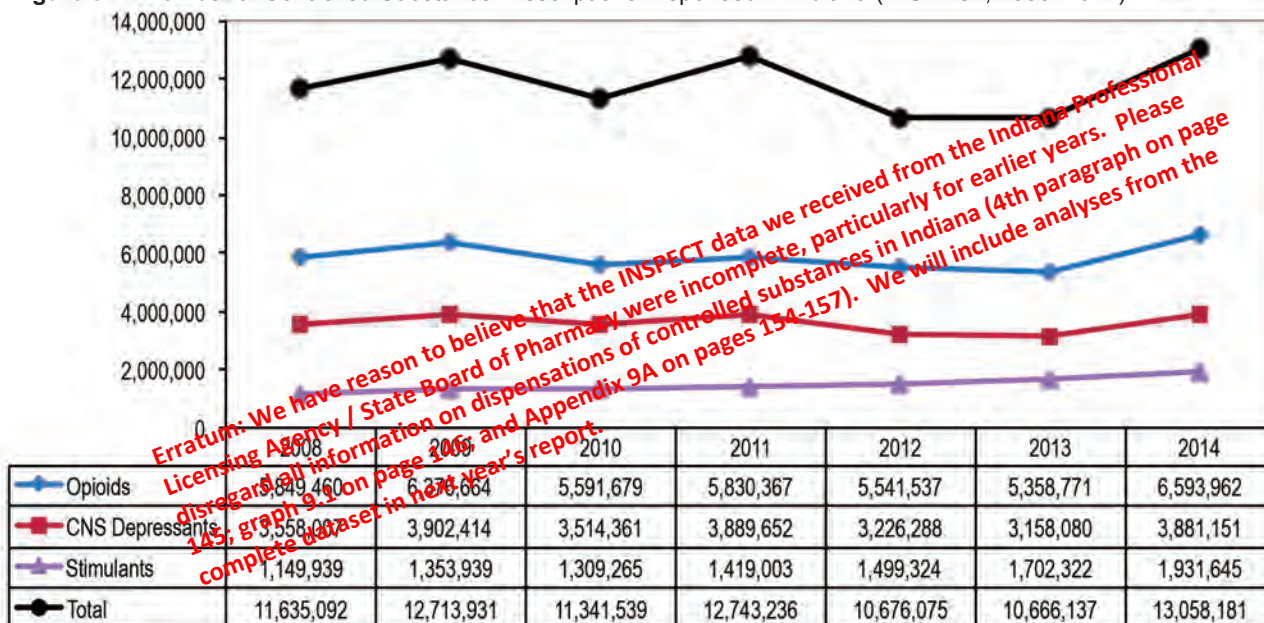
In 2014, more than 13 million prescription drugs were dispensed in Indiana. The Indiana State Board of Professional Licensing Agency / State Board of Pharmacy were incomplete, particularly for earlier years. Please disregard all information on dispensations of controlled substances in Indiana (4th paragraph on page 145; graph 9.1 on page 146; and Appendix 9A on pages 154-157). We will include analyses from the complete dataset in next year's report.

¹Throughout 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.

²The 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.

³Indiana 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, 2008–2014)



Source: Indiana Board of Pharmacy, 2015

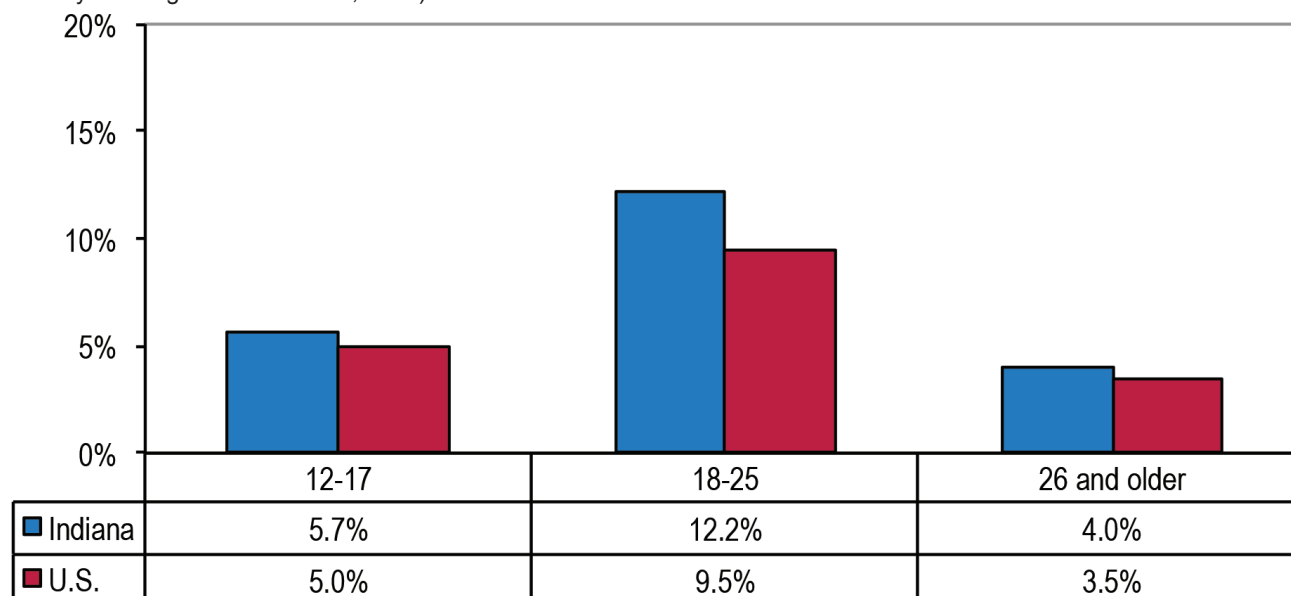
General Consumption Patterns

Based on results from the 2013 National Survey on Drug Use and Health (NSDUH), an estimated 5.3% (95% Confidence Interval [CI]: 4.3–6.5) of the Indiana population ages 12 and older reported nonmedical use of pain relievers in the past year, representing 286,000 Hoosiers. Indiana's prevalence rate was similar to the nation's, at 4.5% (95% CI: 4.3–4.7) (Substance Abuse and Mental Health Services Administration, 2014).

Adult Consumption Patterns

According to 2013 NSDUH results, young people ages 18 through 25 had the highest rate of prescription pain medication abuse. Indiana's past-year usage rate of 12.2% (95% CI: 10.0–14.9) was statistically higher than the nation's rate (9.5%; 95% CI: 9.1–9.9) (see Figure 9.2).

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, 2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

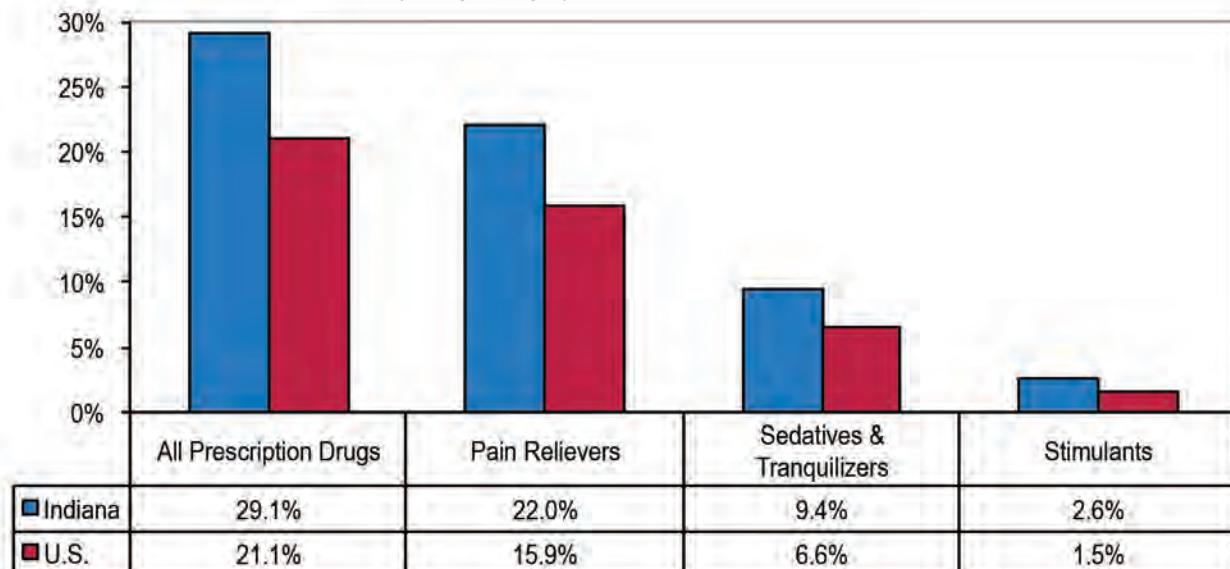
The Indiana College Substance Use Survey includes questions on (a) use of prescription medications not prescribed to the student and (b) use of prescription medication prescribed to student but misused. Findings from the 2014 survey are as follows:

- a) Misuse of prescription medications not prescribed to the student:
- 11.2% of Indiana college students used prescription medications not prescribed to them in the past year, and 3.8% currently use them.
 - Rates were significantly higher among males for both past-year use (13.5%) and current use (4.7%) than among females (9.8% and 3.4%, respectively).
 - Rates were significantly higher for those attending public institutions of higher education (past-year use: 13.5%; current use: 5.0%) than for those who attended private institutions (past-year use: 8.0%; current use: 2.3%).
 - 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:
- 3.0% 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 (3.8%) than females (2.5%), but current misuse for both groups was not significantly different (males: 0.9%, females: 1.0%).
- Rates for past-year misuse were significantly higher for those attending public (3.6%) versus private (2.2%) institutions of higher education, but were not significantly different for current misuse (public: 1.2%, private 0.7%).
- No significant differences in past-year or current use were found for college students ages 21 or over compared to those under 21 (King & Jun, 2014).

Another method of tracking prescription drug abuse is to examine the Treatment Episode Data Set (TEDS) for individuals who report nonmedical use of pain relievers (opioids),⁴ CNS depressants (sedatives and tranquilizers),⁵ and stimulants⁶ at the time of admission to substance abuse treatment (Substance Abuse and Mental Health Data Archive, 2012). Overall reported use of these drug categories in 2012, when combined, was 29.1% in Indiana, which was significantly higher than the rest of the nation's rate of 21.1% ($P < 0.001$). 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, 2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

⁴We used TEDS variables "nonprescription methadone" and "other opiates/synthetics" to define pain reliever use [excludes heroin].

⁵We used TEDS variables "benzodiazepines," "other tranquilizers," "barbiturates," and "other sedatives/hypnotics" to define CNS depressant use.

⁶We used TEDS variables "other amphetamines" and "other stimulants" to define stimulant use.

In Indiana, significant differences in reported prescription drug abuse were seen by gender, race, and age group (see Table 9.1) (Substance Abuse and Mental Health Data Archive, 2012):

- **Gender**—Women reported higher rates of use across all prescription drug categories except for stimulants, where use was statistically similar for both genders.
- **Race**—Whites had the highest rates across all prescription drug categories.

- **Age group**—Differences by age group were observed for all prescription drug categories.

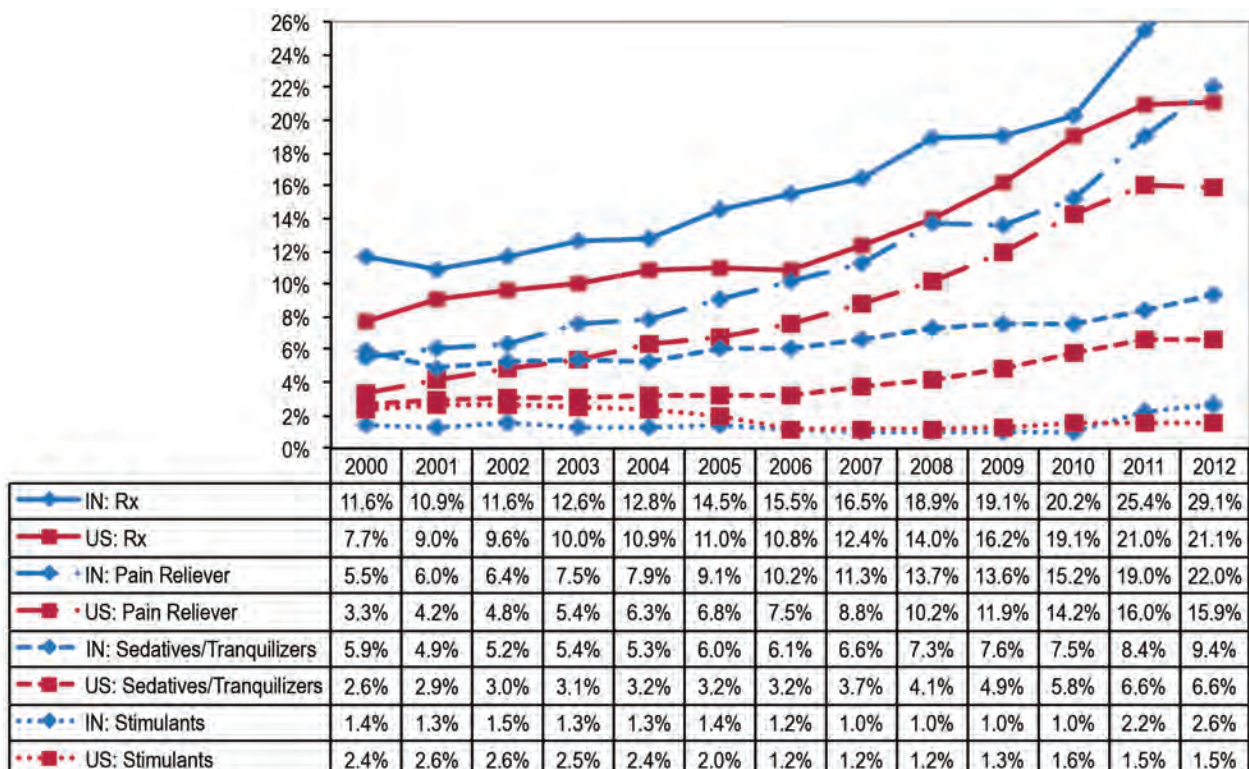
A review of TEDS data from 2000 through 2012 shows that the percentages of treatment episodes with reported prescription drug abuse have increased significantly in Indiana (see Figure 9.4). For county-level information, see Appendix 9B, pages 158-161.

Table 9.1 Percentage of Indiana Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Drug Category, Gender, Race, and Age Group (Treatment Episode Data Set, 2012)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	23.6%	17.3%	7.0%	2.5%
	Female	38.3%	29.8%	13.4%	2.7%
Race	White	33.7%	25.6%	10.8%	3.0%
	Black	6.2%	4.1%	2.2%	0.5%
	Other	21.6%	15.2%	8.0%	2.3%
Age Group	Under 18	17.8%	8.8%	6.3%	4.3%
	18-24	32.3%	22.4%	11.3%	3.2%
	25-34	37.3%	30.0%	11.4%	2.8%
	35-44	25.3%	19.3%	8.0%	2.3%
	45-54	16.7%	12.4%	5.6%	1.4%
	55+	14.2%	11.0%	4.4%	1.2%

Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Youth Consumption Patterns

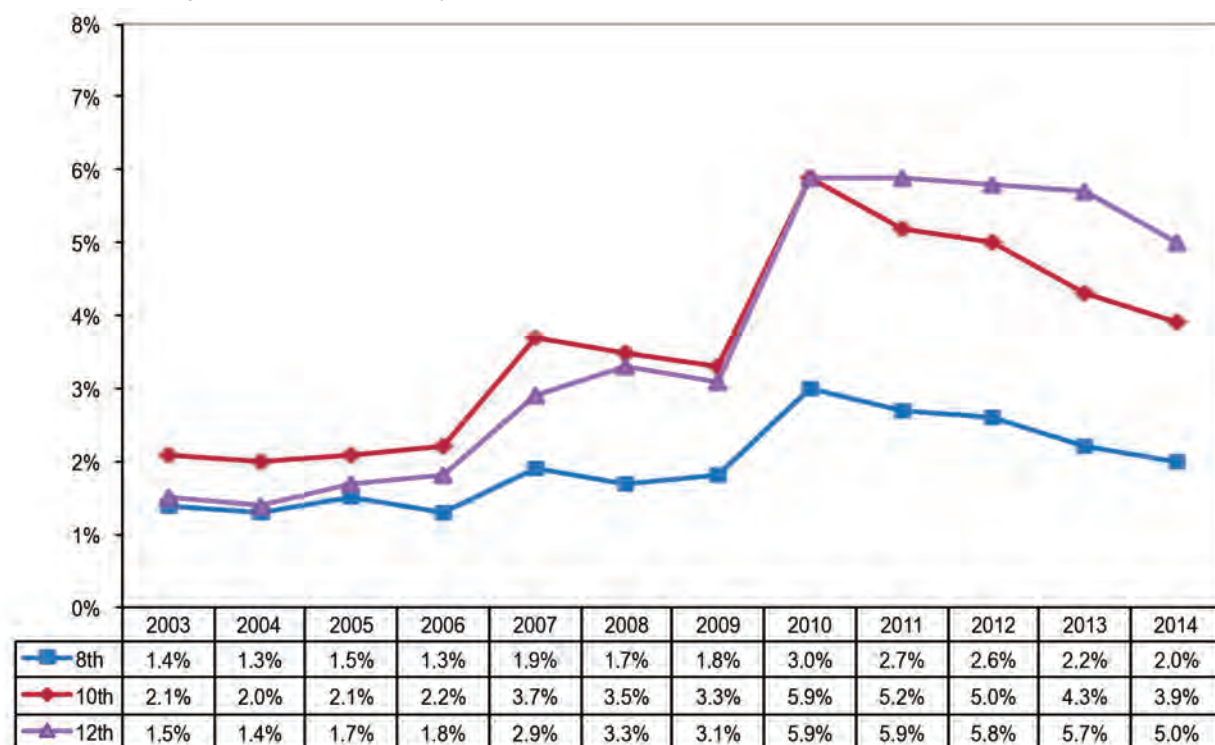
Estimates from the 2012 NSDUH suggest that 5.7% (95% CI: 4.4-7.4) of Indiana's youth ages 12 through 17 used prescription pain medications for nonmedical purposes in the past year. The national rate of prescription drug abuse by 12- to 17-year-olds was statistically similar at 5.0% (95% CI: 4.7-5.3) (Substance Abuse and Mental Health Services Administration, 2014).

For Indiana prevalence rates of current nonmedical use of prescription drugs⁷ among 8th, 10th, and 12th grade students, see Figure 9.5 (Gassman, Jun, Samuel,

Agle, Lee, Boyken, Boyken, et al., 2014). For regional prevalence rates among grades 6 through 12, see Appendix 9C, page 162.

Young Hoosiers (under the age of 18) in treatment reported significantly less use of psychotherapeutics than adults 18 and older. An examination of use by individual drug category showed that young patients were less likely to use pain relievers and sedatives but more likely to use stimulants than their older counterparts (see Figure 9.6).

Figure 9.5 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Nonmedical Use of Prescription Drugs (Indiana Youth Survey, 2003-2014)



Source: Gassman, et al., 2014

PRESCRIPTION DRUG ABUSE CONSEQUENCES

Prescription Drug Dependence

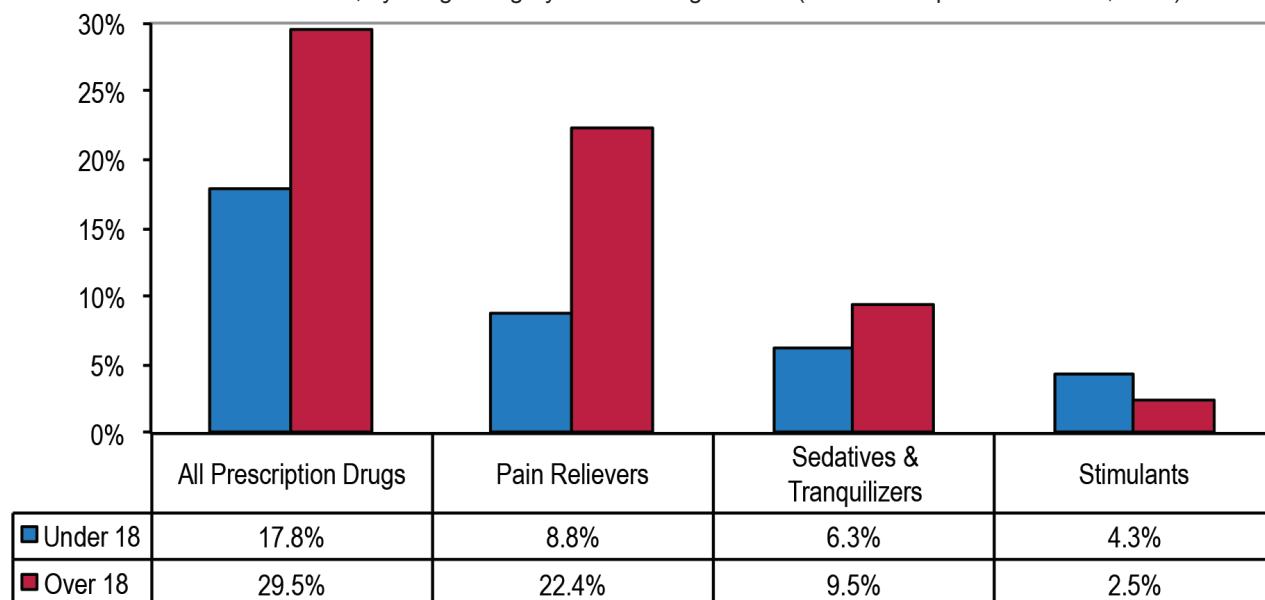
The most common consequences of prescription drug abuse are addiction and/or dependence.⁸ To determine the extent of prescription drug abuse both nationally and in Indiana, we used the TEDS data set to track the

percentage of substance abuse treatment admissions due to pain relievers, sedatives/tranquilizers, and stimulants. In 2012, 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).

⁷Includes Ritalin®, Oxycontin®, and Xanax®.

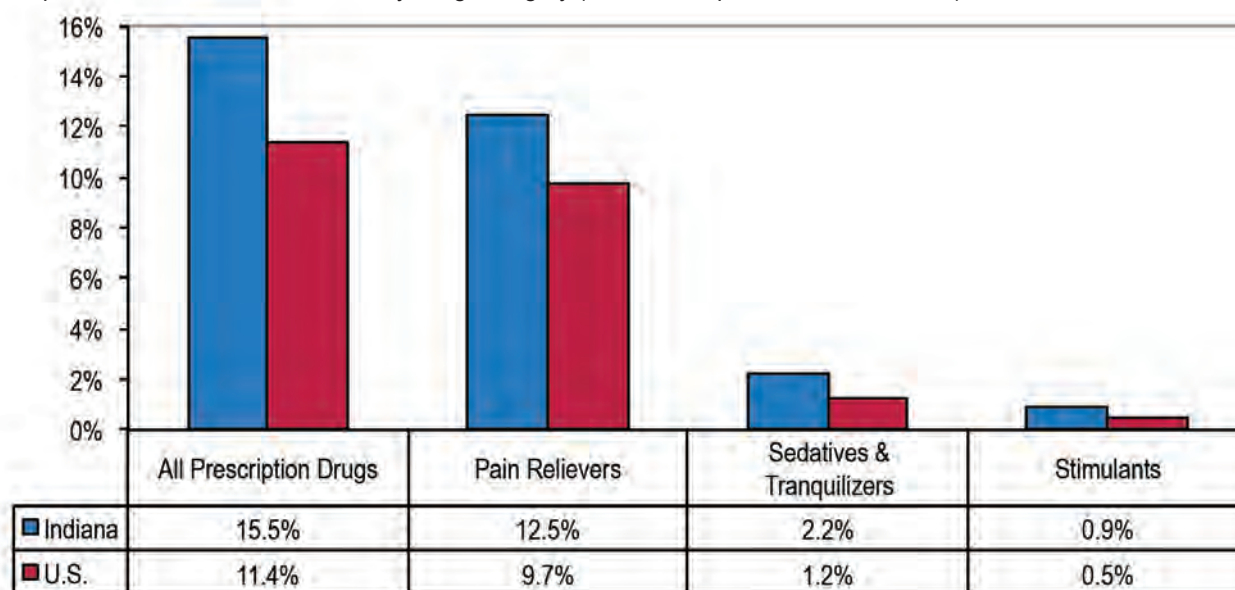
⁸We defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

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, 2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

The percentage of treatment episodes in which prescription drug dependence was indicated varied significantly by gender, race, and age group in Indiana for most prescription drug categories (see Table 9.2) (Substance Abuse and Mental Health Data Archive, 2012):

- **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.
- **Age group**—Significant differences by age category were found for overall prescription drug dependence as well as each category.

For county-level information, see Appendix 9B, pages 158-161.

Table 9.2 Percentage of Indiana Treatment Episodes with Prescription Drug Dependence Reported at Treatment Admission, by Drug Category, Gender, Race, and Age Group (Treatment Episode Data Set, 2012)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	11.2%	8.9%	1.5%	0.8%
	Female	22.8%	18.5%	3.3%	1.0%
Race	White	18.2%	14.6%	2.5%	1.0%
	Black	2.7%	2.0%	0.5%	0.1%
	Other	9.1%	7.5%	1.4%	0.2%
Age Group	Under 18	3.4%	2.3%	0.6%	0.5%
	18 to 24	15.3%	11.7%	2.6%	1.0%
	25 to 34	21.5%	18.1%	2.4%	1.0%
	35 to 44	13.8%	10.8%	2.1%	0.9%
	45 to 54	9.2%	6.9%	1.8%	0.5%
	55+	7.7%	6.3%	1.2%	0.2%

Source: Substance Abuse and Mental Health Data Archive, 2012

A review of TEDS data from 2000 through 2012 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).

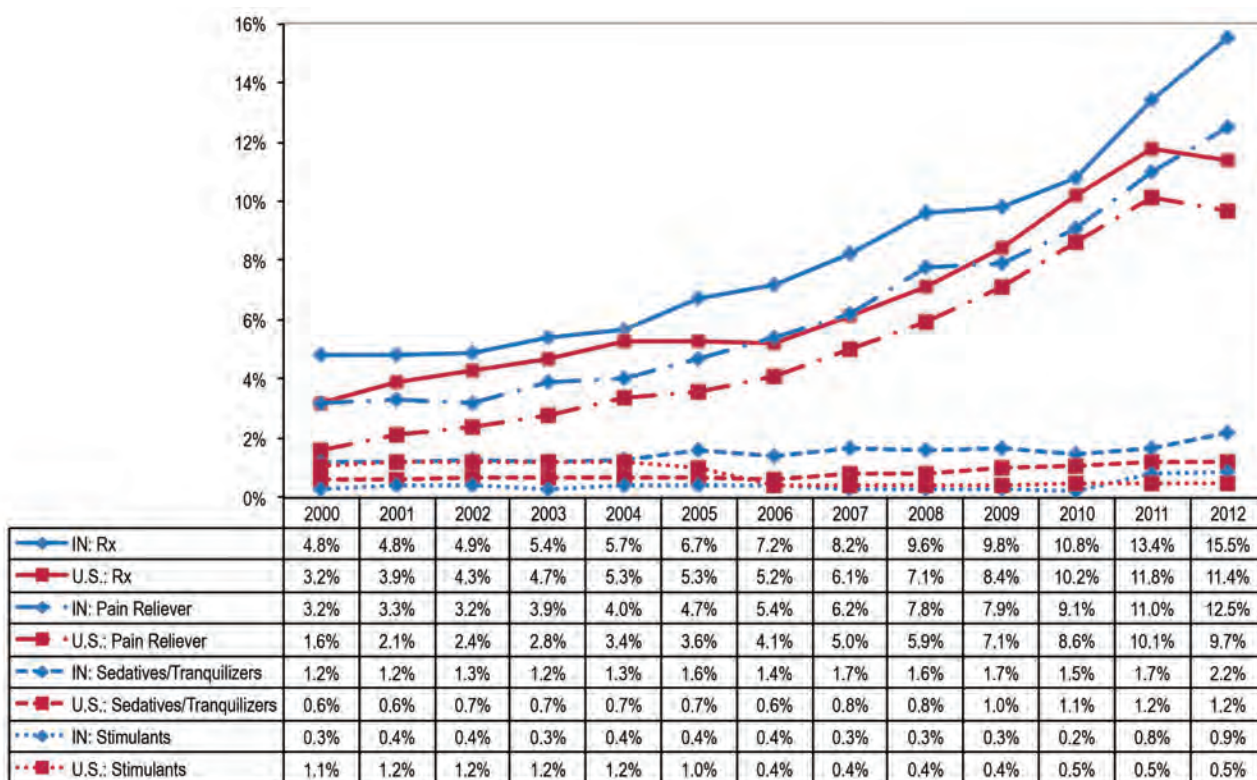
Criminal Consequences

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, family members, and dealers. Patients may also obtain controlled substances when physicians overprescribe, either negligently or intentionally.

The Uniform Crime Reporting (UCR) Program collects information on criminal activities, including possession and sale/manufacture of various drugs (National Archive of Criminal Justice Data, Inter-

university Consortium for Political and Social Research, University of Michigan, 2012). The “other drugs” category in the data set refers to arrests involving barbiturates (sedatives) and Benzedrine (amphetamine/stimulant). In 2012, over 2,500 arrests were made for possession and 1,000 arrests for sale/manufacture of “other drugs” in Indiana. This represents arrest rates of 0.4 (95% CI: 0.4–0.4) and 0.2 (95% CI: 0.1–0.2) per 1,000 population, respectively. The U.S. rates per 1,000 population were statistically higher for possession of “other drugs,” at 0.8 per 1,000 population (95% CI: 0.8–0.8). However, the rates per 1,000 population were the same for sale/manufacture of “other drugs,” at 0.2 per 1,000 population (95% CI: 0.2–0.2) (see Figures 9.9 and 9.10) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012). The distribution of arrest rates for possession and sale/manufacture in Indiana by county for 2012 is depicted on Maps 9.1 and 9.2, pages 166 and 167, and in Appendix 9D, pages 163-164.

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, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

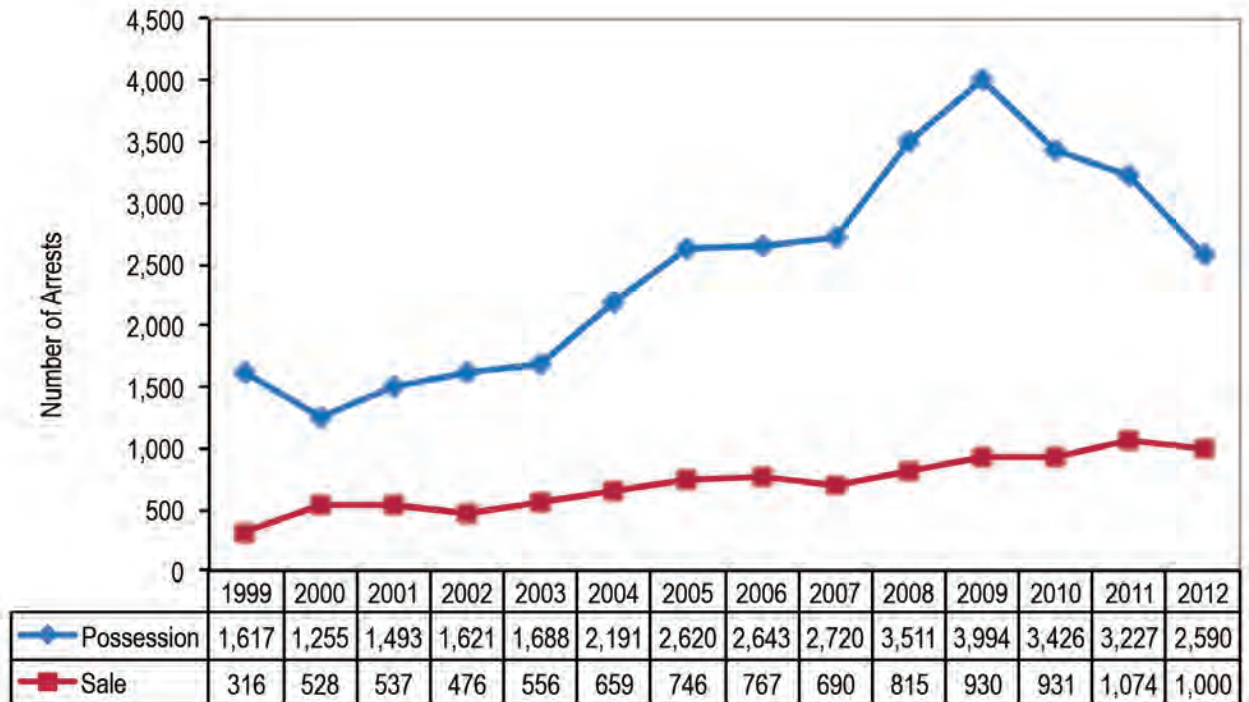
The Indiana Board of Pharmacy collects information on pharmacy robberies in the state. Between January 1, 2012, and December 31, 2012, 113 pharmacy robberies occurred, with the most being in Marion County (41). Of the total number of pharmacy robberies, 105 were armed robbery; 2 were from customer theft; and 6 were from night break-ins. For county-level information, see Appendix 9E, page 165 (Indiana Board of Pharmacy, 2013).

Fatal Drug Overdoses

Since 1999, mortality rates due to prescription drug overdoses have more than doubled in the United States, with an estimated 120 people dying every day (Centers for Disease Control and Prevention, 2015). The number of fatal overdoses increased in Indiana from 281 in 2002 to 1,049 in 2013 (Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2015).⁹ For prescription drug overdose mortality rates, by county, from 2002–2013, see Map 9.3 on page 168.

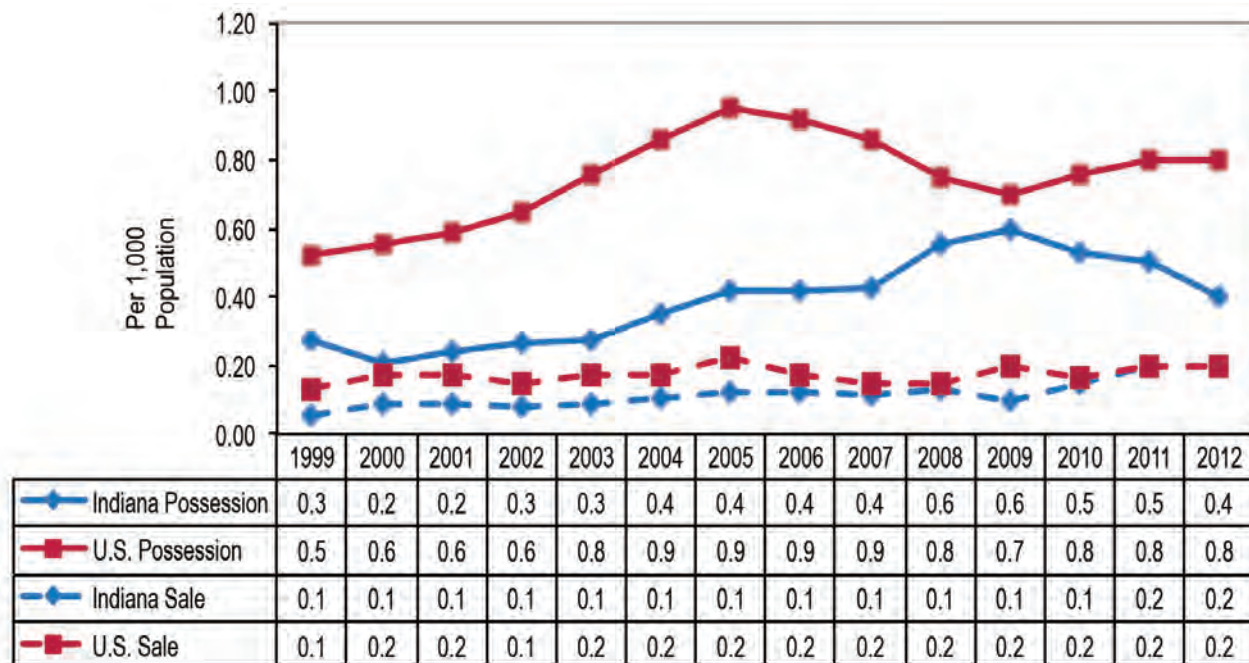
⁹Includes ICD-10 causes of death: X40, X41, X42, X43, X44, X60, X61, X62, X63, X64, Y10, Y11, Y12, Y13, and Y14

Figure 9.9 Number of Arrests for Possession and Sale/Manufacture of “Other Drugs” (Barbiturates and Benzedrine) in Indiana (Uniform Crime Reporting Program, 1999–2012)



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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, 1999–2012)



Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Erratum: We have reason to believe that the INSPECT data we received from the Indiana Professional Licensing Agency / State Board of Pharmacy were incomplete, particularly for earlier years. Please disregard all information on dispensations of controlled substances in Indiana (4th paragraph on page 145; graph 9.1 on page 146; and Appendix 9A on pages 154-157). We will include analyses from the complete dataset in next year's report.

APPENDIX 9A

Number and Percentage of Controlled Prescriptions Dispensed in Indiana, by Prescription Type and County
(INSPECT De-identified Dataset, 2014)

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Adams	24,671	12,637	5,681	2,368	40,357
	54.4%	27.9%	12.5%	5.2%	
Allen	280,298	151,267	87,887	36,524	555,026
	50.5%	27.3%	15.8%	6.4%	
Bartholomew	85,517	48,263	16,879	7,312	157,971
	54.1%	29.3%	10.6%	4.6%	
Benton	8,550	6,575	3,735	842	19,702
	43.4%	33.4%	19.0%	4.3%	
Blackford	1,166	818	390	153	3,227
	57.5%	26.6%	11.1%	4.8%	
Boone	55,934	29,236	23,994	8,006	132,170
	49.1%	26.9%	21.5%	5.1%	
Brown	20,041	10,877	3,921	1,876	36,715
	53.6%	28.6%	10.7%	5.1%	
Carroll	4,941	8,898	4,153	1,328	28,420
	49.4%	31.3%	14.6%	4.7%	
Cass	31,254	19,142	9,554	3,387	65,337
	50.9%	29.3%	14.6%	5.2%	
Clark	143,267	89,305	33,578	13,310	279,460
	51.3%	32.0%	12.0%	4.8%	
Clay	24,931	18,888	6,409	2,494	52,722
	47.3%	35.8%	12.2%	4.7%	
Clinton	40,593	23,342	8,966	3,551	76,452
	53.1%	30.5%	11.7%	4.6%	
Crawford	11,945	5,169	1,866	1,016	19,996
	59.7%	25.9%	9.3%	5.1%	
Daviess	30,659	23,941	7,711	2,306	64,617
	47.4%	37.1%	11.9%	3.6%	
Dearborn	49,122	28,667	10,504	3,792	92,085
	53.3%	31.1%	11.4%	4.1%	
Decatur	27,793	16,384	5,970	2,935	53,082
	52.4%	30.9%	11.2%	5.5%	
DeKalb	35,699	20,674	12,344	3,909	72,626
	49.2%	28.5%	17.0%	5.4%	
Delaware	147,624	69,401	30,543	12,079	259,647
	56.9%	26.7%	11.8%	4.7%	
Dubois	41,058	28,215	12,251	3,431	84,955
	48.3%	33.2%	14.4%	4.0%	
Elkhart	150,578	85,009	76,026	12,365	323,978
	46.5%	26.2%	23.5%	3.8%	
Fayette	37,545	22,605	10,420	2,623	73,193
	51.3%	30.9%	14.2%	3.6%	
Floyd	86,623	57,558	22,877	9,158	176,216
	49.2%	32.7%	13.0%	5.2%	
Fountain	19,290	12,874	3,778	1,954	37,896
	50.9%	34.0%	10.0%	5.2%	

(continued on next page)

APPENDIX 9A (Continued from previous page)

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Franklin	27,960	17,777	7,149	2,126	55,012
	50.8%	32.3%	13.0%	3.9%	
Fulton	20,043	9,757	6,518	2,412	38,730
	51.8%	25.2%	16.9%	6.2%	
Gibson	41,042	27,398	14,587	3,662	86,689
	47.3%	30.6%	13.6%	11%	
Grant	96,642	46,520	27,441	7,124	177,729
	54.4%	26.2%	15.4%	4.0%	
Greene	39,629	20,125	9,967	3,567	73,288
	49.4%	33.5%	12.8%	4.4%	
Hamilton	176,581	142,122	127,508	36,987	477,198
	37.7%	30.2%	26.7%	6.5%	
Hancock	70,783	42,314	31,468	9,700	154,265
	45.9%	27.4%	20.4%	6.3%	
Harrison	45,523	23,525	9,559	4,345	82,946
	54.9%	28.4%	11.5%	5.2%	
Hendricks	110,116	72,338	42,871	14,227	239,552
	46.0%	30.2%	17.9%	5.9%	
Henry	71,118	34,920	15,222	6,014	127,274
	55.9%	27.4%	12.0%	4.7%	
Howard	106,629	55,862	25,034	11,899	199,424
	53.5%	28.0%	12.6%	6.0%	
Huntington	39,982	17,008	9,719	3,927	70,636
	56.6%	24.1%	13.8%	5.6%	
Jackson	53,223	25,337	9,419	5,228	93,207
	57.1%	27.2%	10.1%	5.6%	
Jasper	40,848	25,032	9,813	3,155	78,848
	51.8%	31.7%	12.4%	4.0%	
Jay	24,808	10,949	4,071	2,287	42,115
	58.9%	26.0%	9.7%	5.4%	
Jefferson	44,734	29,798	8,533	4,546	87,611
	51.1%	34.0%	9.7%	5.2%	
Jennings	37,425	18,471	8,001	2,733	66,630
	56.2%	27.7%	12.0%	4.1%	
Johnson	144,665	91,610	42,605	15,641	294,521
	49.1%	31.1%	14.5%	5.3%	
Knox	54,417	38,464	12,624	5,081	110,586
	49.2%	34.8%	11.4%	4.6%	
Kosciusko	68,439	32,552	17,205	8,794	126,990
	53.9%	25.6%	13.5%	6.9%	
LaGrange	19,326	10,111	4,496	1,939	35,872
	53.9%	28.2%	12.5%	5.4%	
Lake	415,042	268,268	92,098	44,153	819,561
	50.6%	32.7%	11.2%	5.4%	
LaPorte	137,834	69,518	32,191	9,096	248,639
	55.4%	28.0%	12.9%	3.7%	
Lawrence	69,152	39,415	13,935	5,660	128,162
	54.0%	30.8%	10.9%	4.4%	

(continued on next page)

APPENDIX 9A (Continued from previous page)

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Madison	177,582	96,707	42,281	18,606	335,176
	53.0%	28.9%	12.6%	5.6%	
Marion	835,267	434,157	251,206	76,592	1,597,222
	52.3%	27.2%	14.7%	4.7%	
Marshall	41,062	24,959	16,086	3,682	85,789
	47.9%	28.1%	16.0%	4.3%	
Martin	15,507	10,775	3,731	1,043	31,056
	49.9%	34.7%	12.0%	3.4%	
Miami	31,933	16,651	5,235	2,905	56,724
	54.3%	25.9%	15.4%	4.5%	
Monroe	100,582	74,598	31,243	11,610	218,033
	49.1%	30.1%	14.5%	5.1%	
Montgomery	40,792	29,125	9,934	4,096	83,947
	48.6%	34.7%	11.8%	4.9%	
Morgan	55,009	51,830	21,606	8,630	179,580
	53.0%	30.2%	12.0%	4.8%	
Newton	10,725	7,048	2,700	955	21,428
	50.1%	32.9%	12.6%	4.5%	
Noble	44,684	23,966	9,648	3,909	82,207
	54.4%	29.2%	11.7%	4.8%	
Ohio	6,7863	3,502	868	519	11,675
	58.1%	30.0%	7.4%	4.4%	
Orange	31,407	17,661	5,843	2,509	57,420
	54.7%	30.8%	10.2%	4.4%	
Owen	30,486	16,787	5,374	2,583	55,230
	55.2%	30.4%	9.7%	4.7%	
Parke	10,787	8,079	2,826	1,235	22,927
	47.0%	35.2%	12.3%	5.4%	
Perry	18,465	11,736	4,401	2,520	37,122
	49.7%	31.6%	11.9%	6.8%	
Pike	17,591	11,923	5,351	1,403	36,268
	48.5%	32.9%	14.8%	3.9%	
Porter	170,469	102,025	46,765	16,448	335,707
	50.8%	30.4%	13.9%	4.9%	
Posey	27,062	17,588	7,557	2,708	54,915
	49.3%	32.0%	13.8%	4.9%	
Pulaski	16,591	8,318	4,102	1,319	30,330
	54.7%	27.4%	13.5%	4.3%	
Putnam	33,282	19,171	7,889	3,190	63,532
	52.4%	30.2%	12.4%	5.0%	
Randolph	31,003	13,161	6,771	2,548	53,483
	58.0%	24.6%	12.7%	4.8%	
Ripley	24,132	13,836	4,499	2,020	44,487
	54.2%	31.1%	10.1%	4.5%	
Rush	19,621	10,418	4,822	1,884	36,745
	53.4%	28.4%	13.1%	5.1%	
Saint Joseph	223,040	138,135	94,135	20,570	475,880
	46.9%	29.0%	19.8%	4.3%	

(continued on next page)

APPENDIX 9A (Continued from previous page)

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Scott	37,382	21,892	6,435	2,883	68,592
	54.5%	31.9%	9.4%	4.2%	
Shelby	46,879	27,003	11,573	3,117	88,572
	51.8%	29.8%	12.8%	5.6%	
Spencer	22,221	13,980	6,566	2,145	44,912
	49.5%	31.1%	16.6%	1.8%	
Starke	34,789	16,391	5,947	2,223	59,251
	58.7%	27.5%	10.0%	3.8%	
Steuben	29,130	9,138	3,038	2,608	53,904
	54.2%	27.7%	13.2%	4.9%	
Sullivan	26,018	8,684	3,121	2,389	52,212
	49.8%	33.8%	1.6%	1.8%	
Switzerland	10,712	5,435	1,649	936	18,732
	57.2%	29.0%	8.8%	5.0%	
Tippecanoe	13,148	2,667	50,236	13,609	286,870
	45.1%	32.3%	17.5%	4.7%	
Tipton	15,139	8,587	4,288	1,845	29,859
	50.7%	28.8%	14.4%	6.2%	
Union	5,809	3,583	1,954	445	11,791
	49.3%	30.4%	16.6%	3.8%	
Vanderburgh	231,181	150,677	80,983	19,797	482,638
	47.9%	31.2%	16.8%	4.1%	
Vermillion	14,887	9,895	3,099	1,607	29,488
	50.5%	33.6%	10.5%	5.4%	
Vigo	102,416	79,188	26,727	11,127	219,458
	46.7%	36.1%	12.2%	5.1%	
Wabash	38,726	15,439	8,118	3,468	65,751
	58.9%	23.5%	12.3%	5.3%	
Warren	5,680	3,715	1,261	569	11,225
	50.6%	33.1%	11.2%	5.1%	
Warrick	62,009	44,995	28,133	6,322	141,459
	43.8%	31.8%	19.9%	4.5%	
Washington	33,109	19,197	6,664	2,615	61,585
	53.8%	31.2%	10.8%	4.2%	
Wayne	88,088	52,325	19,674	6,954	167,041
	52.7%	31.3%	11.8%	4.2%	
Wells	23,713	11,716	5,543	2,430	43,402
	54.6%	27.0%	12.8%	5.6%	
White	27,444	18,607	7,701	2,484	56,236
	48.8%	33.1%	13.7%	4.4%	
Whitley	34,717	17,143	8,080	4,506	64,446
	53.9%	26.6%	12.5%	7.0%	
Indiana	6,421,260	3,794,154	1,886,396	634,068	12,735,878
	50.4%	29.8%	14.8%	5.0%	

* Other category contains controlled substances not defined as opioids, depressants, or stimulants.

Source: Indiana Board of Pharmacy, 2015

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, 2014)

County	Treatment Episodes Total	All Rx Abuse Number	%	All Rx Dependence Number	%	Opioid Abuse Number	%	Opioid Dependence Number	%
Adams	151	32	21.2%	9	6.0%	28	18.5%	7	4.6%
Allen	1,717	260	15.1%	132	7.7%	219	12.8%	119	6.9%
Bartholomew	672	230	34.2%	96	14.3%	185	27.5%	65	9.7%
Benton	49	16	32.7%	6	12.2%	9	18.4%	<5	N/A
Blackford	58	29	50.0%	18	31.0%	24	41.4%	17	29.3%
Boone	227	51	22.5%	33	14.5%	44	19.4%	31	13.7%
Brown	91	33	36.3%	15	16.5%	24	26.4%	10	11.0%
Carroll	102	30	29.4%	16	15.7%	22	21.6%	10	9.8%
Cass	277	63	22.7%	23	8.3%	52	18.8%	21	7.6%
Clark	475	148	31.2%	126	26.5%	124	26.1%	106	22.3%
Clay	189	25	13.2%	13	6.9%	20	10.6%	11	5.8%
Clinton	201	61	30.3%	29	14.4%	52	25.9%	22	10.9%
Crawford	62	29	46.8%	21	33.9%	24	38.7%	18	29.0%
Daviess	151	43	28.5%	27	17.9%	31	20.5%	23	15.2%
Dearborn	508	207	40.7%	92	18.1%	190	37.4%	87	17.1%
Decatur	176	43	24.4%	27	15.3%	37	21.0%	22	12.5%
DeKalb	241	40	16.6%	17	7.1%	30	12.4%	15	6.2%
Delaware	1,037	444	42.8%	286	27.6%	404	39.0%	270	26.0%
Dubois	278	77	27.7%	43	15.5%	54	19.4%	33	11.9%
Elkhart	722	107	14.8%	58	8.0%	86	11.9%	46	6.4%
Fayette	216	111	51.4%	59	27.3%	74	34.3%	27	12.5%
Floyd	232	73	31.5%	65	28.0%	66	28.4%	56	24.1%
Fountain	57	23	40.4%	13	22.8%	17	29.8%	11	19.3%
Franklin	181	74	40.9%	36	19.9%	66	36.5%	34	18.8%
Fulton	217	51	23.5%	22	10.1%	40	18.4%	17	7.8%
Gibson	228	54	23.7%	28	12.3%	37	16.2%	20	8.8%
Grant	495	189	38.2%	126	25.5%	163	32.9%	112	22.6%
Greene	201	74	36.8%	48	23.9%	61	30.3%	37	18.4%
Hamilton	987	216	21.9%	123	12.5%	171	17.3%	103	10.4%
Hancock	207	72	34.8%	46	22.2%	58	28.0%	40	19.3%
Harrison	36	8	22.2%	5	13.9%	6	16.7%	5	13.9%
Hendricks	365	84	23.0%	50	13.7%	68	18.6%	40	11.0%
Henry	358	198	55.3%	154	43.0%	165	46.1%	125	34.9%
Howard	683	308	45.1%	165	24.2%	281	41.1%	157	23.0%
Huntington	97	32	33.0%	19	19.6%	28	28.9%	17	17.5%
Jackson	323	93	28.8%	44	13.6%	76	23.5%	36	11.1%
Jasper	111	46	41.4%	20	18.0%	36	32.4%	14	12.6%
Jay	98	29	29.6%	14	14.3%	26	26.5%	12	12.2%
Jefferson	380	155	40.8%	80	21.1%	123	32.4%	51	13.4%
Jennings	288	81	28.1%	40	13.9%	71	24.7%	30	10.4%
Johnson	239	85	35.6%	50	20.9%	69	28.9%	45	18.8%
Knox	309	79	25.6%	49	15.9%	53	17.2%	39	12.6%
Kosciusko	270	55	20.4%	33	12.2%	40	14.8%	26	9.6%
LaGrange	165	20	12.1%	8	4.8%	13	7.9%	6	3.6%
Lake	2,671	388	14.5%	191	7.2%	280	10.5%	148	5.5%
LaPorte	557	138	24.8%	78	14.0%	125	22.4%	76	13.6%
Lawrence	474	193	40.7%	124	26.2%	176	37.1%	105	22.2%
Madison	1,064	408	38.3%	237	22.3%	332	31.2%	209	19.6%
Marion	4,375	1,276	29.2%	747	17.1%	1,068	24.4%	687	15.7%
Marshall	255	52	20.4%	33	12.9%	38	14.9%	28	11.0%
Martin	51	21	41.2%	14	27.5%	18	35.3%	10	19.6%
Miami	305	100	32.8%	49	16.1%	80	26.2%	42	13.8%

(continued on next page)

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

County	Treatment Episodes Total	All Rx Abuse		All Rx Dependence		Opioid Abuse		Opioid Dependence	
		Number	%	Number	%	Number	%	Number	%
Monroe	1,364	417	30.6%	184	13.5%	308	22.6%	122	8.9%
Montgomery	317	86	27.1%	45	14.2%	62	19.6%	37	11.7%
Morgan	477	139	29.1%	56	11.7%	108	22.6%	42	8.8%
Newton	38	10	26.3%	<5	N/A	8	21.1%	<5	N/A
Noble	220	33	15.0%	11	5.0%	23	10.5%	6	2.7%
Ohio	44	14	31.8%	8	18.2%	14	31.8%	8	18.2%
Orange	139	67	48.2%	44	31.7%	59	42.4%	40	28.8%
Owen	203	50	24.6%	24	11.8%	37	18.2%	17	8.4%
Parke	97	20	20.6%	11	11.3%	15	15.5%	10	10.3%
Perry	133	37	27.8%	18	13.5%	26	19.5%	12	9.0%
Pike	43	14	32.6%	11	25.6%	13	30.2%	9	20.9%
Porter	709	244	34.4%	145	20.5%	203	28.6%	133	18.8%
Posey	133	30	22.6%	15	11.3%	24	18.0%	13	9.8%
Pulaski	119	42	35.3%	30	25.2%	38	31.9%	29	24.4%
Putnam	229	54	23.6%	27	11.8%	39	17.0%	23	10.0%
Randolph	192	62	32.3%	37	19.3%	51	26.6%	25	13.0%
Ripley	249	71	28.5%	36	14.5%	63	25.3%	29	11.6%
Rush	160	56	35.0%	26	16.3%	34	21.3%	10	6.3%
Saint Joseph	1,543	247	16.0%	116	7.5%	182	11.8%	97	6.3%
Scott	130	53	40.8%	43	33.1%	47	36.2%	38	29.2%
Shelby	157	52	33.1%	30	19.1%	41	26.1%	25	15.9%
Spencer	169	46	27.2%	21	12.4%	30	17.8%	16	9.5%
Starke	247	133	53.8%	80	32.4%	121	49.0%	77	31.2%
Steuben	214	17	7.9%	9	4.2%	17	7.9%	8	3.7%
Sullivan	80	39	48.8%	22	27.5%	27	33.8%	17	21.3%
Switzerland	67	21	31.3%	12	17.9%	19	28.4%	11	16.4%
Tippecanoe	453	104	23.0%	43	9.5%	74	16.3%	37	8.2%
Tipton	65	27	41.5%	14	21.5%	26	40.0%	13	20.0%
Union	40	21	52.5%	9	22.5%	16	40.0%	5	12.5%
Vanderburgh	1,377	412	29.9%	202	14.7%	305	22.1%	169	12.3%
Vermillion	114	31	27.2%	22	19.3%	27	23.7%	20	17.5%
Vigo	729	158	21.7%	72	9.9%	107	14.7%	58	8.0%
Wabash	244	72	29.5%	38	15.6%	63	25.8%	29	11.9%
Warren	21	7	33.3%	<5	N/A	6	28.6%	<5	N/A
Warrick	328	101	30.8%	62	18.9%	82	25.0%	54	16.5%
Washington	95	27	28.4%	17	17.9%	21	22.1%	14	14.7%
Wayne	455	125	27.5%	58	12.7%	89	19.6%	31	6.8%
Wells	127	40	31.5%	23	18.1%	38	29.9%	22	17.3%
White	161	35	21.7%	15	9.3%	27	16.8%	11	6.8%
Whitley	104	25	24.0%	14	13.5%	21	20.2%	13	12.5%
County Info Missing	99	14	14.1%	5	5.1%	10	10.1%	<5	N/A
Indiana	35,764	10,007	28.0%	5,519	15.4%	8,105	22.7%	4,640	13.0%

Note: We defined prescription drug dependence as “individuals in substance abuse treatment listing prescription drugs as their primary substance at admission.”

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

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

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 9B — PART 2

County	CNS Depressant Abuse		CNS Depressant Dependence		Stimulant Abuse		Stimulant Dependence	
	Number	%	Number	%	Number	%	Number	%
Adams	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Allen	59	3.4%	5	0.3%	24	1.4%	8	0.5%
Bartholomew	60	8.9%	25	3.7%	8	1.2%	6	0.9%
Benton	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Blackford	9	15.5%	<5	N/A	<5	N/A	<5	N/A
Boone	10	4.4%	<5	N/A	<5	N/A	<5	N/A
Brown	9	9.9%	5	5.5%	<5	N/A	<5	N/A
Carroll	11	10.8%	5	4.9%	<5	N/A	<5	N/A
Cass	9	3.2%	<5	N/A	10	3.6%	<5	N/A
Clark	29	6.1%	20	4.2%	<5	N/A	<5	N/A
Clay	9	4.8%	<5	N/A	<5	N/A	<5	N/A
Clinton	13	6.5%	<5	N/A	7	3.5%	<5	N/A
Crawford	6	9.7%	<5	N/A	<5	N/A	<5	N/A
Daviess	19	12.6%	<5	N/A	<5	N/A	<5	N/A
Dearborn	33	6.5%	<5	N/A	5	1.0%	<5	N/A
Decatur	9	5.1%	5	2.8%	<5	N/A	<5	N/A
DeKalb	11	4.6%	<5	N/A	6	2.5%	<5	N/A
Delaware	95	9.2%	13	1.3%	17	1.6%	<5	N/A
Dubois	36	12.9%	8	2.9%	7	2.5%	<5	N/A
Elkhart	18	2.5%	6	0.8%	15	2.1%	6	0.8%
Fayette	42	19.4%	27	12.5%	8	3.7%	5	2.3%
Floyd	11	4.7%	9	3.9%	<5	N/A	<5	N/A
Fountain	6	10.5%	<5	N/A	<5	N/A	<5	N/A
Franklin	14	7.7%	<5	N/A	<5	N/A	<5	N/A
Fulton	10	4.6%	<5	N/A	7	3.2%	1	0.5%
Gibson	22	9.6%	7	3.1%	<5	N/A	<5	N/A
Grant	56	11.3%	12	2.4%	19	3.8%	<5	N/A
Greene	18	9.0%	9	4.5%	6	3.0%	<5	N/A
Hamilton	58	5.9%	15	1.5%	18	1.8%	5	0.5%
Hancock	19	9.2%	6	2.9%	5	2.4%	<5	N/A
Harrison	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Hendricks	24	6.6%	8	2.2%	<5	N/A	<5	N/A
Henry	66	18.4%	27	7.5%	8	2.2%	<5	N/A
Howard	83	12.2%	8	1.2%	5	0.7%	<5	N/A
Huntington	8	8.2%	<5	N/A	5	5.2%	<5	N/A
Jackson	19	5.9%	5	1.5%	<5	N/A	<5	N/A
Jasper	20	18.0%	5	4.5%	1	0.9%	<5	N/A
Jay	3	3.1%	0	0.0%	2	2.0%	<5	N/A
Jefferson	41	10.8%	24	6.3%	13	3.4%	5	1.3%
Jennings	16	5.6%	8	2.8%	2	0.7%	<5	N/A
Johnson	27	11.3%	4	1.7%	2	0.8%	<5	N/A
Knox	40	12.9%	9	2.9%	2	0.6%	<5	N/A
Kosciusko	10	3.7%	5	1.9%	5	1.9%	<5	N/A
LaGrange	7	4.2%	2	1.2%	3	1.8%	<5	N/A
Lake	143	5.4%	37	1.4%	19	0.7%	6	0.2%
LaPorte	23	4.1%	2	0.4%	4	0.7%	<5	N/A
Lawrence	41	8.6%	16	3.4%	5	1.1%	<5	N/A
Madison	121	11.4%	21	2.0%	16	1.5%	7	0.7%
Marion	332	7.6%	51	1.2%	37	0.8%	9	0.2%
Marshall	14	5.5%	2	0.8%	4	1.6%	<5	N/A
Martin	6	11.8%	2	3.9%	2	3.9%	<5	N/A
Miami	24	7.9%	5	1.6%	7	2.3%	<5	N/A
Monroe	122	8.9%	51	3.7%	25	1.8%	11	0.8%
Montgomery	28	8.8%	7	2.2%	4	1.3%	<5	N/A

(continued on next page)

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

County	CNS Depressant Abuse		CNS Depressant Dependence		Stimulant Abuse		Stimulant Dependence	
	Number	%	Number	%	Number	%	Number	%
Morgan	40	8.4%	11	2.3%	7	1.5%	<5	N/A
Newton	6	15.8%	1	2.6%	1	2.6%	<5	N/A
Noble	9	4.1%	2	0.9%	5	2.3%	<5	N/A
Ohio	1	2.3%	0	0.0%	0	0.0%	<5	N/A
Orange	12	8.6%	2	1.4%	5	3.6%	<5	N/A
Owen	19	9.4%	7	3.4%	1	0.5%	<5	N/A
Parke	6	6.2%	<5	N/A	<5	N/A	<5	N/A
Perry	18	13.5%	5	3.8%	<5	N/A	<5	N/A
Pike	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Porter	52	7.3%	11	1.6%	10	1.4%	<5	N/A
Posey	13	9.8%	<5	N/A	<5	N/A	<5	N/A
Pulaski	10	8.4%	<5	N/A	<5	N/A	<5	N/A
Putnam	19	8.3%	<5	N/A	<5	N/A	<5	N/A
Randolph	15	7.8%	9	4.7%	5	2.6%	<5	N/A
Ripley	13	5.2%	6	2.4%	<5	N/A	<5	N/A
Rush	24	15.0%	11	6.9%	6	3.8%	5	3.1%
Saint Joseph	89	5.8%	14	0.9%	18	1.2%	5	0.3%
Scott	6	4.6%	<5	N/A	<5	N/A	<5	N/A
Shelby	16	10.2%	<5	N/A	<5	N/A	<5	N/A
Spencer	17	10.1%	<5	N/A	<5	N/A	<5	N/A
Starke	33	13.4%	<5	N/A	<5	N/A	<5	N/A
Steuben	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Sullivan	11	13.8%	<5	N/A	<5	N/A	<5	N/A
Switzerland	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Tippecanoe	42	9.3%	<5	N/A	10	2.2%	<5	N/A
Tipton	7	10.8%	<5	N/A	<5	N/A	<5	N/A
Union	9	22.5%	<5	N/A	<5	N/A	<5	N/A
Vanderburgh	184	13.4%	33	2.4%	19	1.4%	<5	N/A
Vermillion	9	7.9%	<5	N/A	<5	N/A	<5	N/A
Vigo	64	8.8%	11	1.5%	<5	N/A	<5	N/A
Wabash	17	7.0%	8	3.3%	<5	N/A	<5	N/A
Warren	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Warrick	42	12.8%	7	2.1%	<5	N/A	<5	N/A
Washington	9	9.5%	<5	N/A	<5	N/A	<5	N/A
Wayne	40	8.8%	23	5.1%	8	1.8%	<5	N/A
Wells	5	3.9%	<5	N/A	<5	N/A	<5	N/A
White	12	7.5%	<5	N/A	<5	N/A	<5	N/A
Whitley	<5	N/A	<5	N/A	<5	N/A	<5	N/A
County Info Missing	6	6.1%	<5	N/A	<5	N/A	<5	N/A
Indiana	2,819	7.9%	710	2.0%	512	1.4%	169	0.5%

Note: We defined prescription drug dependence as “individuals in substance abuse treatment listing prescription drugs as their primary substance at admission.”

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

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

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 9C

Percentage of Indiana Students Reporting Lifetime and Monthly Nonmedical Prescription Drug Use, by Region and Grade (Indiana Youth Survey, 2014)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	1.4	1.2	1.5	0.4	1.8	1.8	0.3	1.5	1.4
	Monthly	0.7	0.7	0.8	0.4	0.5	0.9	0.3	0.5	0.5
7th Grade	Lifetime	2.3	2.4	2.6	2.5	1.8	2.5	1.9	1.8	2.6
	Monthly	1.2	1.5	1.0	1.8	1.0	1.5	0.9	0.9	1.4
8th Grade	Lifetime	4.2	4.7	4.4	2.0*	3.5	4.3	4.8	3.5*	4.4
	Monthly	2.0	2.2	2.5	0.5	1.6	2.0	2.2	1.7	1.8
9th Grade	Lifetime	6.3	7.0	6.6	3.8*	7.7*	5.9	7.7	5.0*	6.4
	Monthly	3.0	3.1*	3.0	2.3	3.6	2.6	4.4*	2.4	3.1
10th Grade	Lifetime	9.3	10.6*	9.9	7.3	10.1	8.4	10.5	8.1*	9.6
	Monthly	3.9	5.0*	3.9	2.9	4.3	3.4	3.4	3.3	4.2
11th Grade	Lifetime	11.9	13.5*	11.2	7.7*	11.1	12.1	12.2	10.8	12.7
	Monthly	4.4	5.3*	4.1	4.3	4.2	4.0	5.0	4.3	4.3
12th Grade	Lifetime	13.5	16.2*	14.1	10.5	13.0	11.4*	14.8	12.6	13.7
	Monthly	5.0	6.7	5.2	4.2	4.4	3.4	7.3*	4.7	4.5

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., 2014

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, 2012)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	8	*0.2	2	*0.1
Allen	106	0.3	60	0.2
Bartholomew	27	0.3	0	*0.0
Benton	2	*0.2	1	*0.1
Blackford	2	*0.2	3	*0.2
Boone	9	*0.2	4	*0.1
Brown	0	*0.0	0	*0.0
Carroll	8	*0.4	0	*0.0
Cass	35	0.9	32	0.8
Clark	20	0.2	4	*0.0
Clay	7	*0.3	3	*0.1
Clinton	11	*0.3	15	*0.5
Crawford	3	*0.3	0	*0.0
Daviess	23	0.7	3	*0.1
Dearborn	2	*0.0	9	*0.2
Decatur	29	1.1	28	1.1
DeKalb	13	*0.3	8	*0.2
Delaware	1	*0.0	1	*0.0
Dubois	8	*0.2	2	*0.0
Elkhart	12	*0.1	1	*0.0
Fayette	12	*0.5	4	*0.2
Floyd	162	2.1	144	1.9
Fountain	6	*0.4	4	*0.2
Franklin	6	*0.3	9	*0.4
Fulton	14	*0.7	8	*0.4
Gibson	32	1.0	2	*0.1
Grant	1	*0.0	2	*0.0
Greene	4	*0.1	1	*0.0
Hamilton	16	*0.1	7	*0.0
Hancock	29	0.4	12	*0.2
Harrison	3	*0.1	0	*0.0
Hendricks	57	0.4	15	*0.1
Henry	36	0.7	12	*0.2
Howard	92	1.1	10	*0.1
Huntington	6	*0.2	0	*0.0
Jackson	57	1.3	28	0.7
Jasper	9	*0.3	12	*0.4
Jay	8	*0.4	1	*0.0
Jefferson	14	*0.4	5	*0.2
Jennings	1	*0.0	6	*0.2
Johnson	51	0.4	45	0.3
Knox	37	1.0	11	*0.3
Kosciusko	35	0.5	29	0.4
LaGrange	3	*0.1	0	*0.0
Lake	395	0.8	81	0.2
LaPorte	18	*0.2	3	*0.0
Lawrence	19	*0.4	3	*0.1
Madison	137	1.1	55	0.4
Marion	31	0.0	39	0.0

(continued on next page)

APPENDIX 9D (Continued from previous page)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	29	0.6	10	*0.2
Martin	3	*0.3	2	*0.2
Miami	4	*0.1	0	*0.0
Monroe	121	0.9	31	0.2
Montgomery	59	1.5	3	*0.1
Morgan	70	1.0	16	*0.2
Newton	0	*0.0	1	*0.1
Noble	22	0.5	6	*0.1
Ohio	2	*0.3	1	*0.2
Orange	2	*0.1	0	*0.0
Owen	7	*0.3	3	*0.1
Parke	3	*0.2	1	*0.1
Perry	11	*0.6	2	*0.1
Pike	5	*0.4	2	*0.2
Porter	122	0.7	14	*0.1
Posey	7	*0.3	3	*0.1
Pulaski	4	*0.3	4	*0.3
Putnam	6	*0.2	3	*0.1
Randolph	10	*0.4	3	*0.1
Ripley	10	*0.4	2	*0.1
Rush	43	2.5	24	1.4
Saint Joseph	73	0.3	8	*0.0
Scott	2	*0.1	1	*0.0
Shelby	1	*0.0	0	*0.0
Spencer	8	*0.4	2	*0.1
Starke	1	*0.0	2	*0.1
Steuben	57	1.7	6	*0.2
Sullivan	2	*0.1	1	*0.0
Switzerland	4	*0.4	1	*0.1
Tippecanoe	29	0.2	12	*0.1
Tipton	10	*0.6	4	*0.3
Union	2	*0.3	1	*0.1
Vanderburgh	129	0.7	44	0.2
Vermillion	0	*0.0	0	*0.0
Vigo	30	0.3	5	*0.0
Wabash	12	*0.4	4	*0.1
Warren	3	*0.4	1	*0.1
Warrick	25	0.4	31	0.5
Washington	9	*0.3	3	*0.1
Wayne	7	*0.1	2	*0.0
Wells	12	*0.4	12	*0.4
White	2	*0.1	0	*0.0
Whitley	15	*0.5	5	*0.2
Indiana	2,590	0.4	1,000	0.2

* Rates based on arrest numbers lower than 20 are unreliable.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

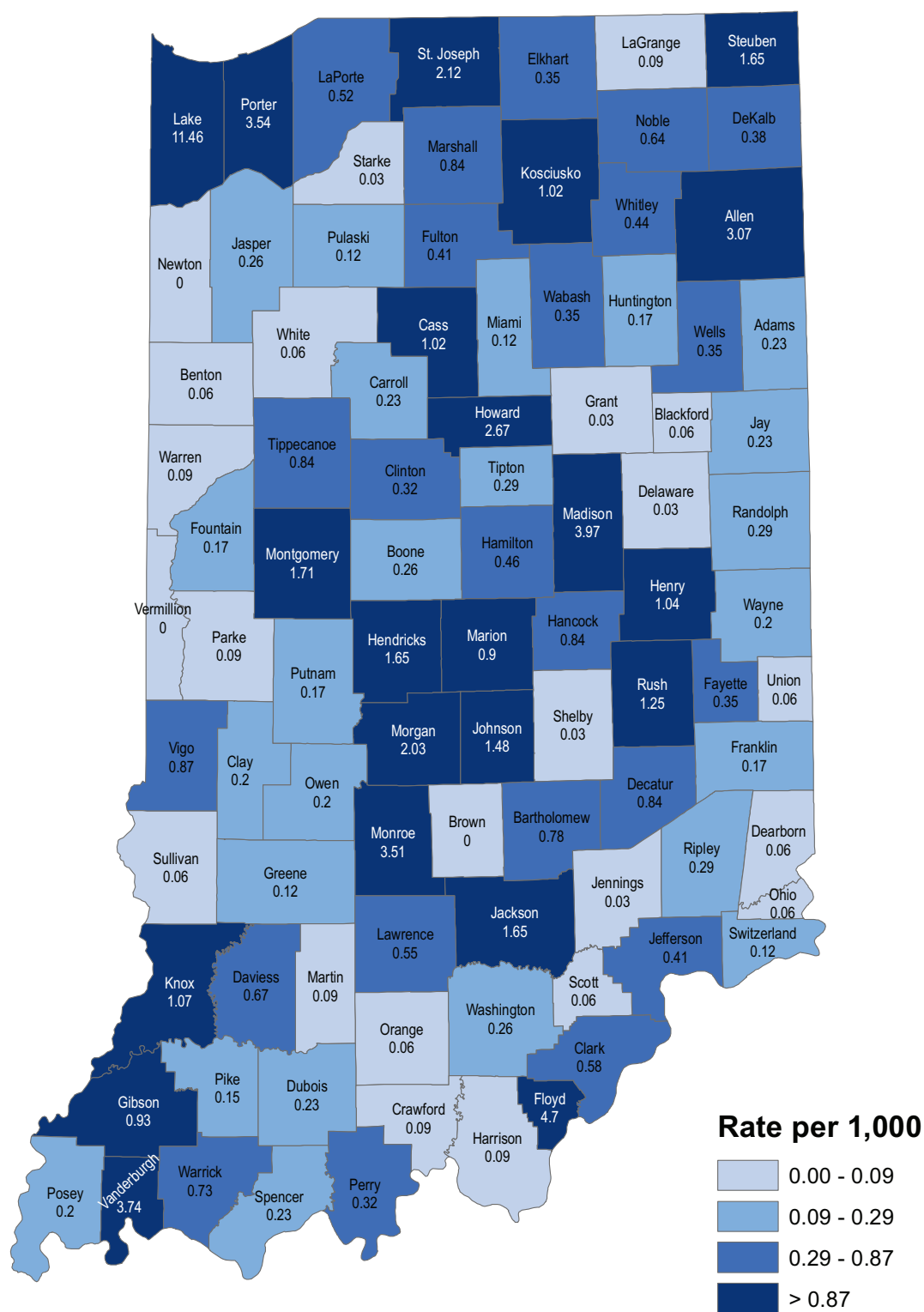
APPENDIX 9E

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, 2013

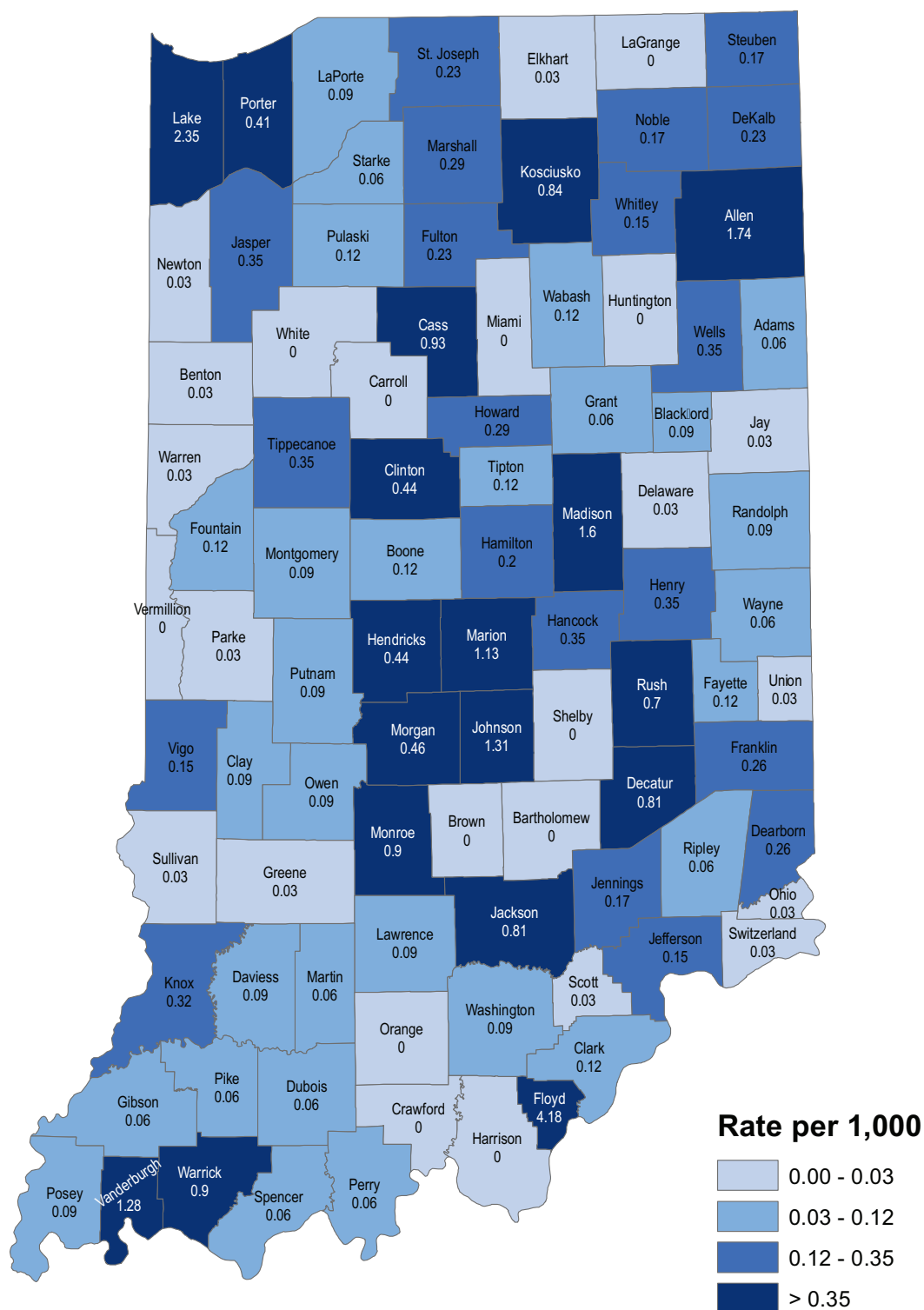
Map 9.1 Arrest Rates, per 1,000 Population, for Possession of “Other Drugs” (Barbiturates and Benzedrine) in Indiana, by County (Uniform Crime Reporting Program, 2012)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 9D (pages 163-164) for additional information.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

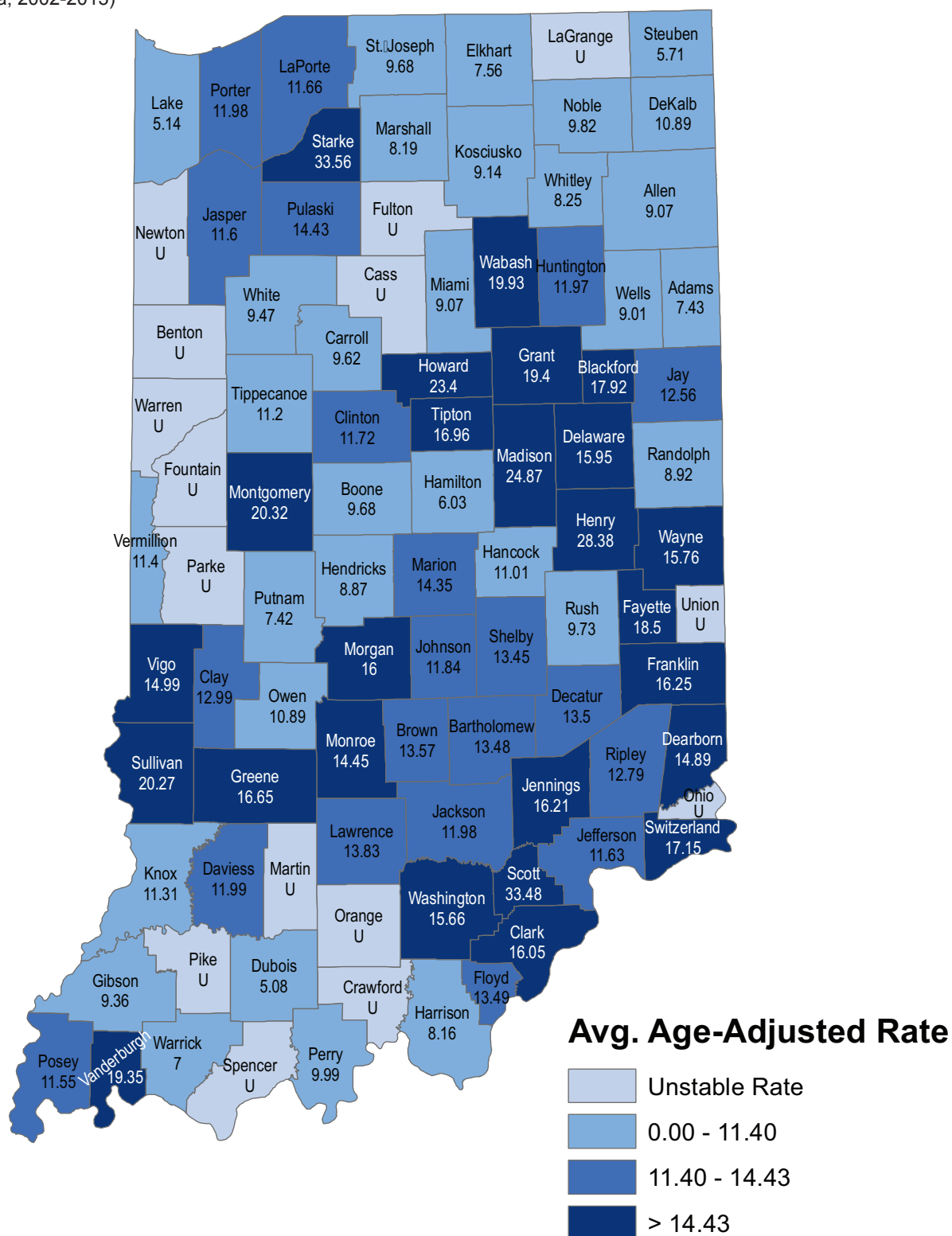
Map 9.2 Arrest Rates, per 1,000 Population, for Sale/Manufacture of “Other Drugs” (Barbiturates and Benzedrine) in Indiana, by County (Uniform Crime Reporting Program, 2012)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 9D (pages 163-164) for additional information.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Map 9.3 Average Age-Adjusted Prescription Drug Overdose Mortality Rate in Indiana, by County (Indiana Mortality Data, 2002-2013)



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

Rates based on number of deaths <20 are not computed, but marked unstable ("U").

Source: Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2015

REFERENCES, CHAPTER 9

- Centers for Disease Control and Prevention. (2015). *Prescription overdose in the United States: Fact sheet*. Retrieved from <http://www.cdc.gov/homeandrecreationalafety/overdose/facts.html>
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., & Oi, S. E. (2014). *Indiana Youth Survey*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana Board of Pharmacy. (2015). *De-identified INSPECT dataset for 2014*. Data received January 19, 2015, from the Indiana Board of Pharmacy, Indiana Professional Licensing Agency.
- Indiana Board of Pharmacy. (2013). *Pharmacy robberies by county*. Data received November 12, 2013, from Gregory Pachmayr, Director, Indiana Board of Pharmacy.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Data received January 20, 2015, from Indiana Family and Social Services Administration.
- Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team. (2015). *Deaths by Poisoning, 2002-2013*. Data received February 12, 2015, from the Indiana State Department of Health.
- King, R. A., & Jun, M. K. (2014). *Results of the Indiana College Substance Use Survey—2014*. Bloomington, IN: Indiana Prevention Resource Center, Indiana University.
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2012). *Uniform Crime Reporting Program*. Retrieved from <http://www.icpsr.umich.edu/NACJD/>
- National Institute on Drug Abuse. (2014). *Research report series: Prescription drug abuse*. Retrieved from http://www.drugabuse.gov/sites/default/files/prescriptiondrugrrs_11_14.pdf
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>
- Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh/reports>
- United States General Accounting Office. (2003). *Prescription drugs: OxyContin abuse and diversion and efforts to address the problem: Report to Congressional committees*. Washington, D.C.: United States General Accounting Office.

10

POLYSUBSTANCE ABUSE

Polysubstance Abuse

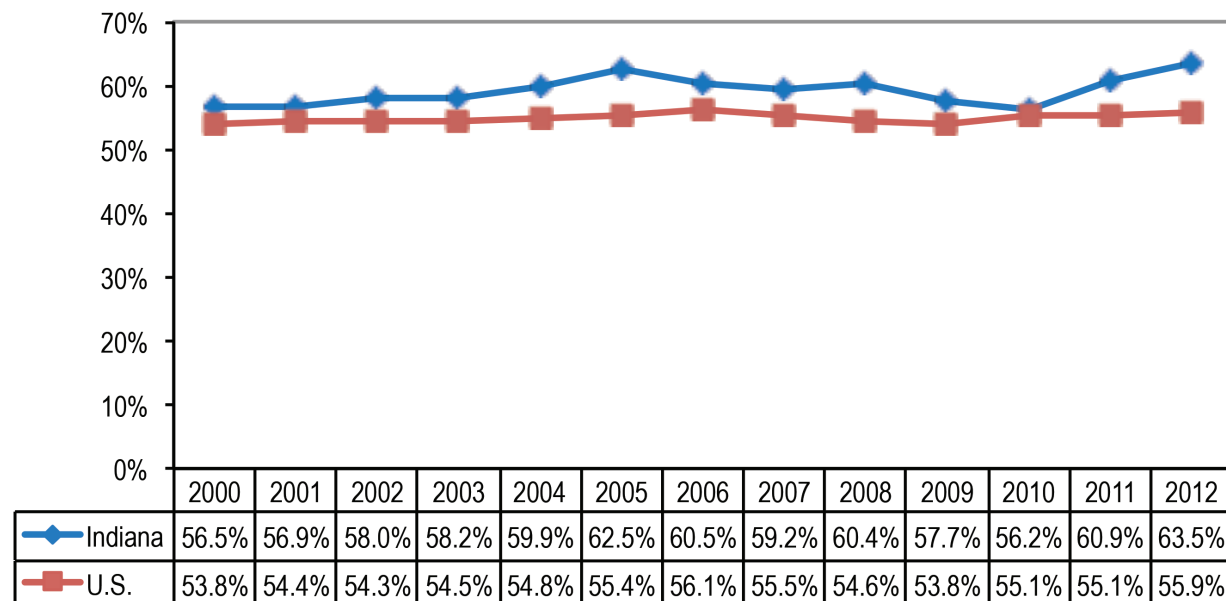
Polysubstance abuse refers to substance abuse during which two or more substances are used in combination. It is a particularly serious pattern of drug abuse that appears to be generally established by late adolescence (Collins, Ellickson, & Bell, 1998).

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, 2012). 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 2012 TEDS data indicates use of at least two drugs reported at the time of treatment admission for over half of the treatment episodes in the database (see Figure 10.1).

Compared to the rest of the United States, the percentage of reported polysubstance abuse among the treatment population was statistically significantly higher in Indiana. Also, use of two or more substances increased significantly from 2000 in Indiana, peaking at 63.5% in 2012 (see Figure 10.1). County-level treatment data on individuals using two or more substances is available in Appendix 10A, pages 181-182.

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, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Among Indiana treatment episodes alone, 29% reported use of only two substances and 35% reported use of three substances (see Figure 10.2).

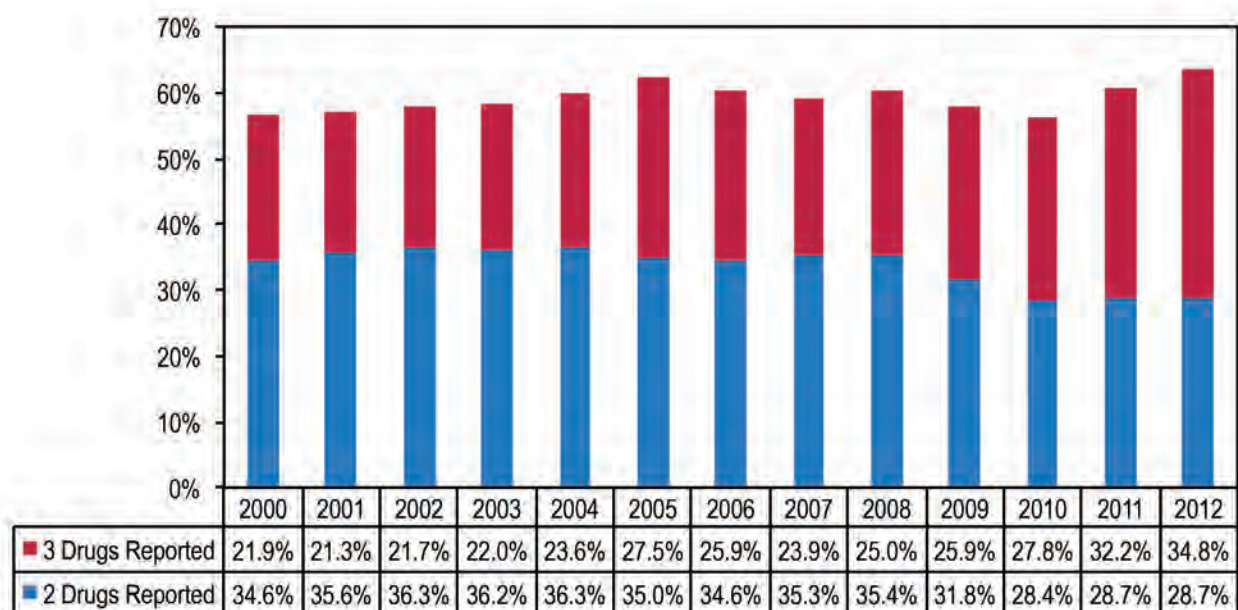
Demographic Characteristics of Polysubstance Users

Gender—From 2000 through 2012, the percentage of both males and females reporting use of two or more

substances at treatment admission fluctuated between 56% and 65% (see Figure 10.3).

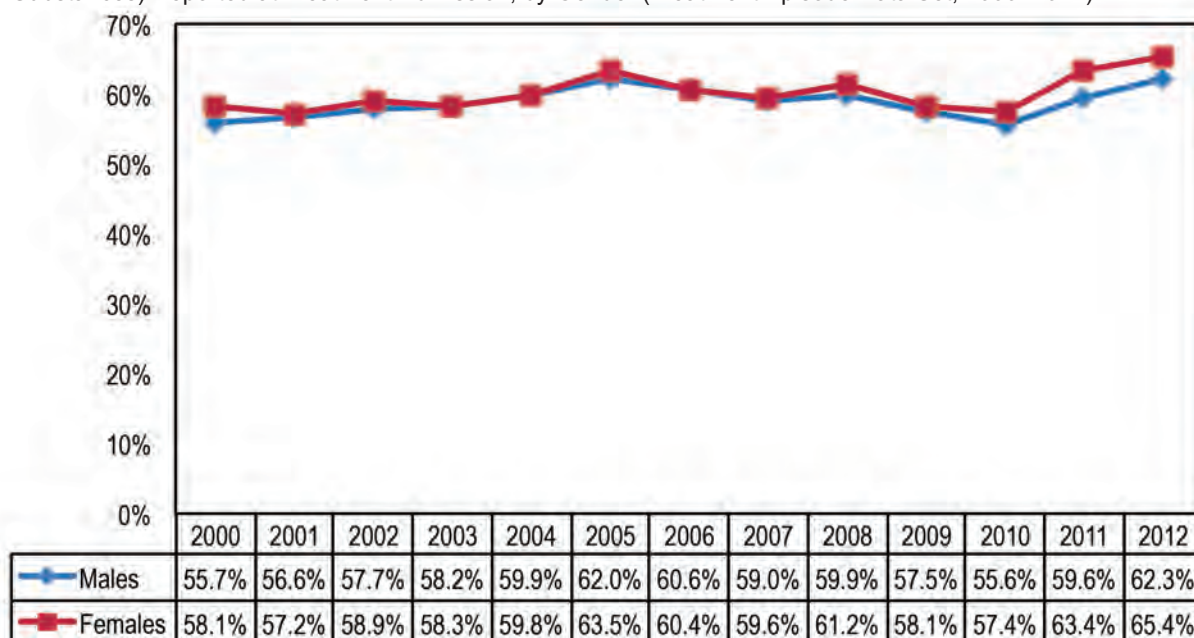
In 2012, the percentage of men using two drugs was statistically larger than the percentage of women using two drugs; however, a statistically larger percentage of women reported use of three drugs (see Figure 10.4).

Figure 10.2 Percentage of Indiana Treatment Episodes with Use of Two and Three Substances Reported at Treatment Admission (Treatment Episode Data Set, 2000–2012)



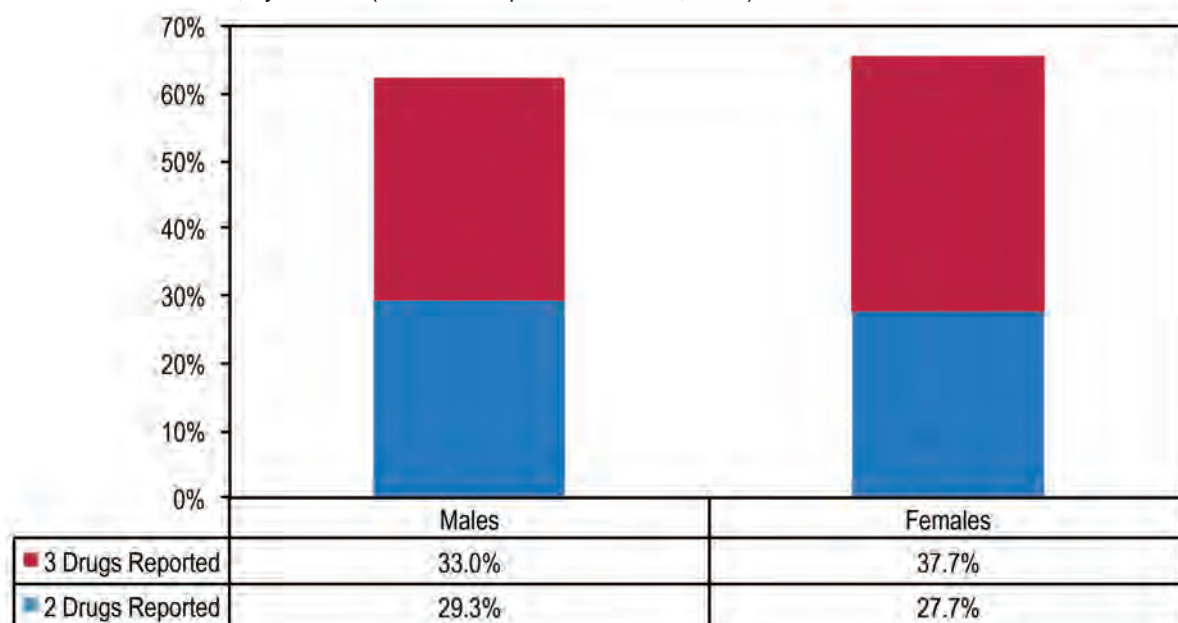
Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

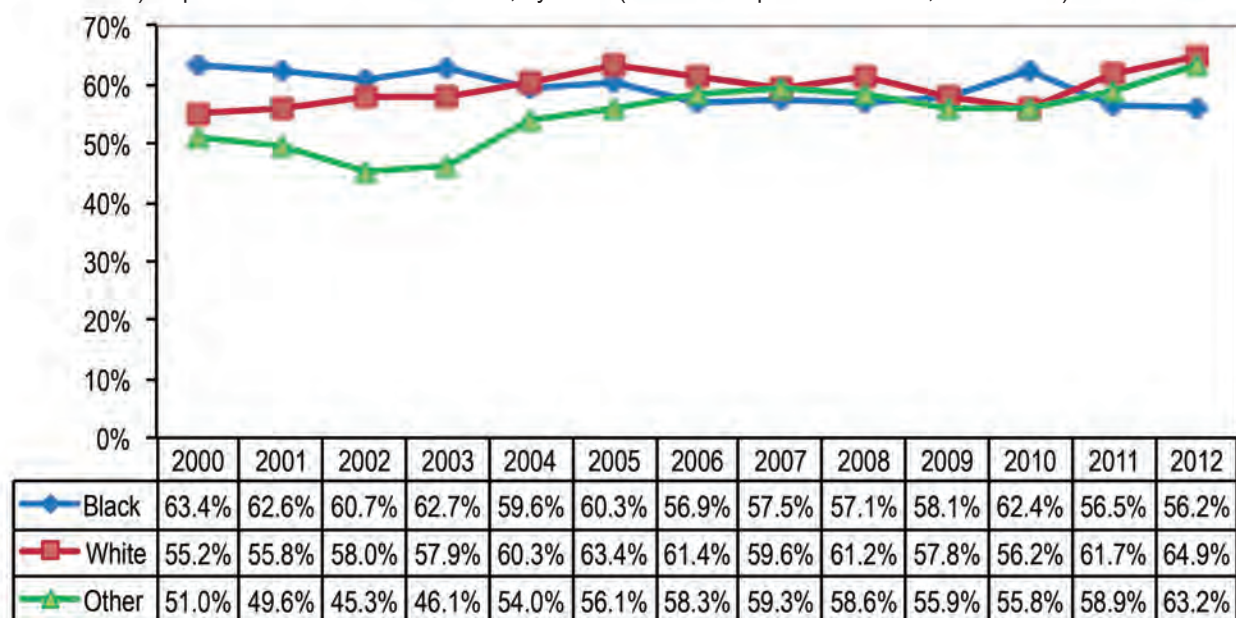
Race—The percentage of treatment episodes with polysubstance abuse reported at admission decreased for blacks from 63.4% in 2000 to 56.2% in 2012; however, it increased for whites (from 55.2% to 64.9%) and other races (from 51.0% to 63.2%) (see Figure 10.5).

In 2012, reported use of two substances was highest among the black treatment population (32.9%), while use of three substances was greatest among whites (37.0%) (see Figure 10.6).

Age—Adults ages 18 to 24 had the highest percentage of polysubstance abuse reported at

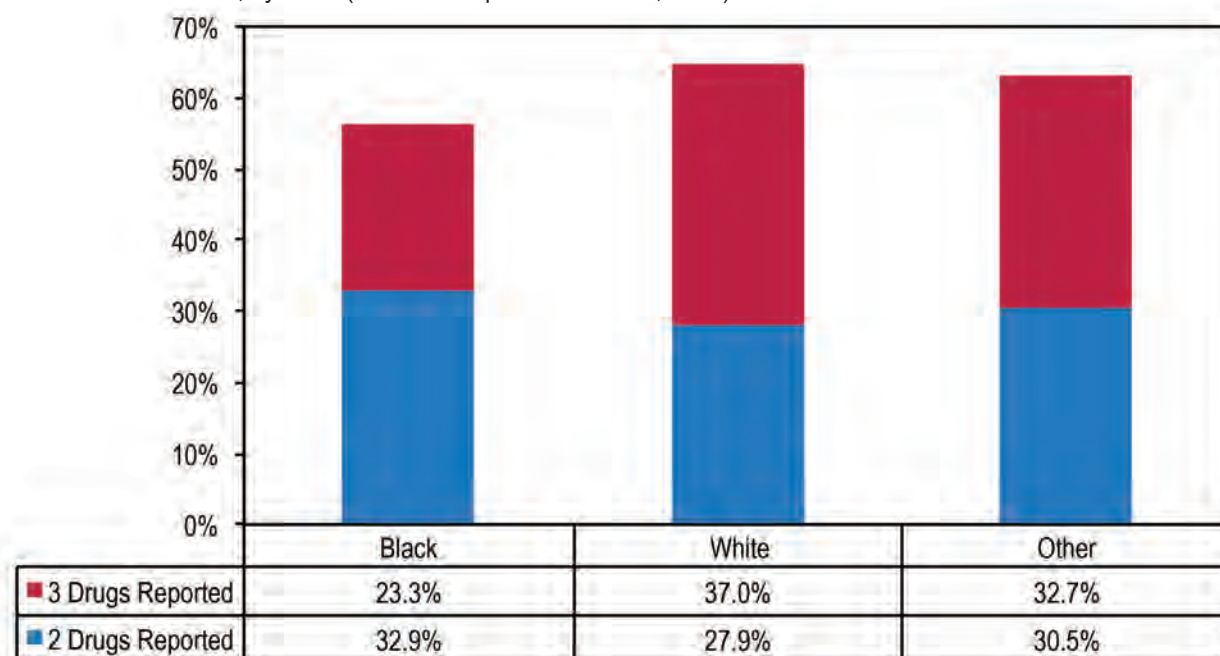
treatment admission at 68.5%, closely followed by 25- to 34-year-olds at 66.5%. Over 60% of young people under 18 reported using at least two substances in 2012, an increase of more than 10% from 2010. The percentage of adults ages 55 and over using at least two substances has increased steadily from 23.1% in 2000 to a high of 47.3% in 2012 (see Figure 10.7). Individuals 18 to 24 had the highest percentage of using two drugs (31.2%), while 25- to 34-year-olds had the greatest percentage of using three drugs at 39.0% (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, 2000–2012)



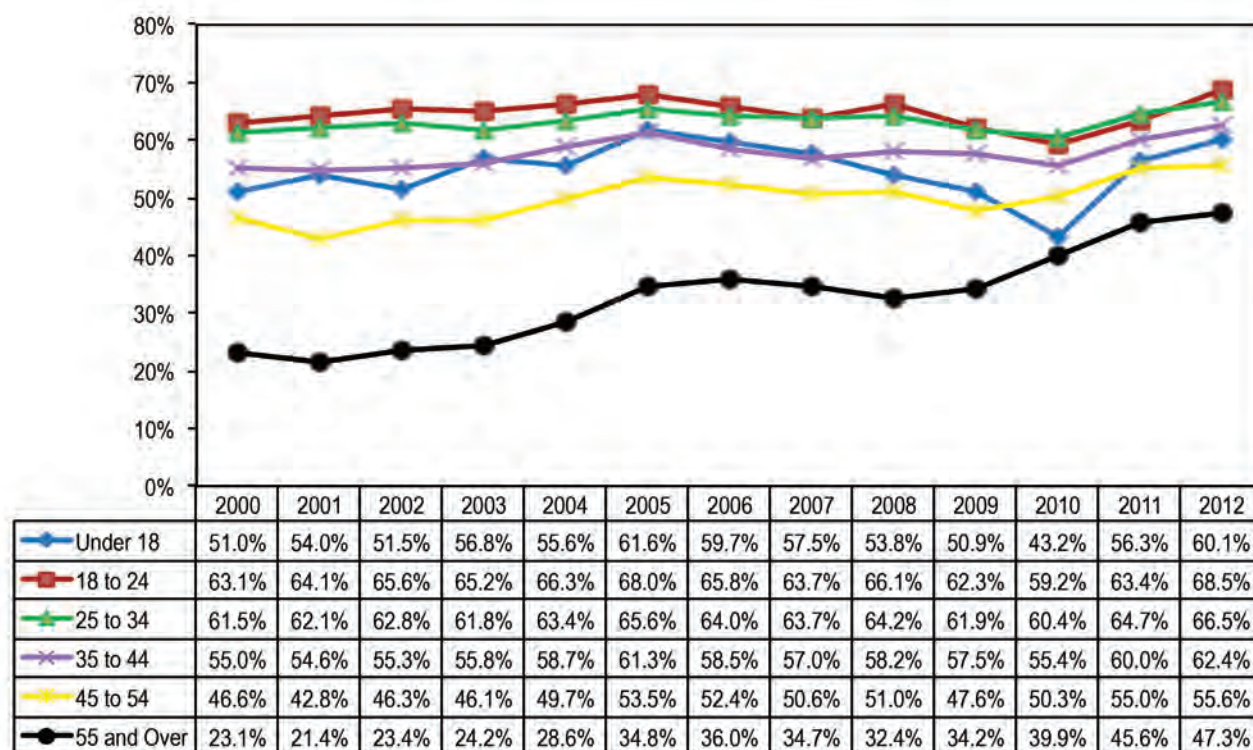
Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2012)



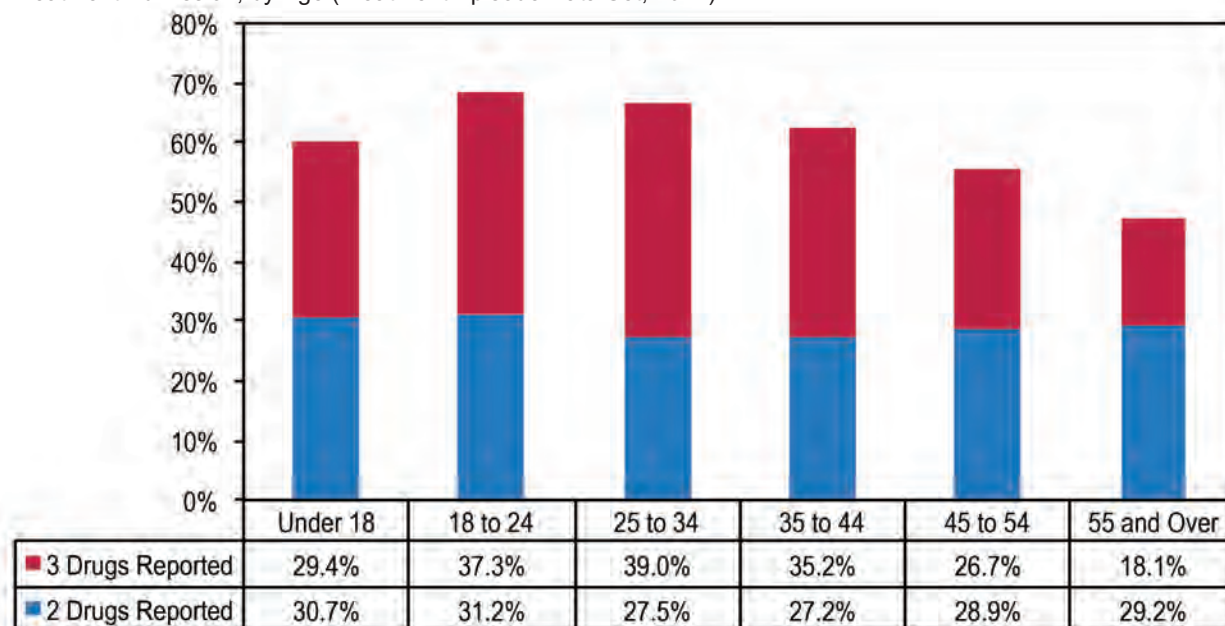
Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2000–2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2012)



Source: Substance Abuse and Mental Health Data Archive, 2012

Polysubstance Abuse Clusters in Indiana

Statewide Analysis—We conducted a cluster analysis of 2012 Indiana TEDS data to determine the combinations of drugs currently used by polysubstance abusers within the state. The cluster analysis was completed in two steps following standardized methods (Hair, Anderson, Tatham, & Black, 1995).

In the first step, we performed a hierarchical cluster analysis specifying solutions with 2 to 20 clusters using Ward's method (Hair et al., 1995). Second, we used the results of the hierarchical cluster analysis to create "seed points" to serve as cluster centroids for follow-up K-Means cluster analyses, specifying 2 to 20 clusters. We selected this two-step method because it produces clusters that are more easily interpretable (Hair et al., 1995).

Then, to select the final classification solution, we compared the cubic clustering criteria (the expected value of the within sum of squares) with the face-validity of the set of drugs across the clusters (Hair et al., 1995). The results of the K-Means cluster analyses indicated that a 9-cluster solution best fit the available data.

Tables 10.1 and 10.2, pages 178-179, show the image and identity matrices for the 9-cluster solution.

The image matrix represents the percentage of individuals within a cluster who used each specific drug. Using cluster 3 as an example, 82% of the individuals in this cluster used alcohol, 100% used cocaine, 65% used marijuana, 0% used heroin and so on. A specific drug was considered part of a cluster if at least 50% of the individuals within the cluster used the drug. An examination of the image matrix shows that all clusters except for cluster 8 have at least two substances represented. Ninety-nine 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, meaning 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 1, 3, 8 and 7. These clusters

accounted for more than half of polysubstance users in the analysis (54.9%). Individuals in cluster 1 reported using a combination of alcohol and marijuana. Polysubstance users in cluster 3 reported using a combination of alcohol, cocaine, and marijuana. The individuals making up cluster 8 reported using heroin in combination with various other drugs. Polysubstance users in cluster 7 reported using a combination of alcohol, marijuana, and methamphetamine. The remaining five clusters each accounted for 10.8% to 4.0% of polysubstance users.

Alcohol and marijuana were the most commonly reported drugs, with alcohol appearing in seven of the nine clusters and marijuana appearing in six of the nine clusters. The next most frequently reported drug categories were opiates-synthetic drugs and drugs in the “other drug” category, each appearing in two of the nine clusters. Cocaine, heroin, methamphetamine, and benzodiazepines were each represented in one cluster. For detailed information on all nine clusters, see Table 10.3 (page 179).

Table 10.4 (page 180) breaks down the clusters by demographic characteristics. In terms of gender, men accounted for 50% or more of the individuals within eight of the nine clusters. Women comprised just over 53% of the individuals in cluster 5 (marijuana/opiates-synthetics). Clusters 1, 3, and 4 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 3, the only cluster that contained cocaine. Whites represented more than 90% of the population in clusters 5, 6, 7, and 8. These four clusters included opiates-synthetics, methamphetamine, or heroin.

Over 50% of polysubstance abusers within seven of the nine clusters were between the ages of 21 and 39 (clusters 1, 4, 5, 6, 7, 8, and 9). The majority of individuals in cluster 2 were between the ages of 21 to 49 while most individuals in cluster 3 were between the ages of 30 to 49. The youngest polysubstance users, those between the ages of 12 and 20, were more likely to be found in clusters 1 (alcohol/marijuana), 4 (alcohol/marijuana/other drug), and 9 (alcohol/benzodiazepines). Older polysubstance users, those 40 years of age and above, were most strongly represented in clusters 2 (alcohol/other drug) and 3 (alcohol/cocaine/marijuana).

County-Level Analyses—We completed cluster analyses for each county within Indiana using the 2014 county-level TEDS data set. Appendix 10B (pages 183-188) 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 49 of 92 counties.

Table 10.1 Image Matrix for Polysubstance Abuse Clusters (Treatment Episode Data Set, 2012)

Image Matrix	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
Drug									
alcohol	0.98	0.76	0.82	0.63	0.00	1.00	0.62	0.09	0.75
cocaine	0.00	0.15	1.00	0.04	0.12	0.08	0.18	0.38	0.05
marijuana	0.98	0.00	0.65	1.00	0.60	0.45	0.73	0.26	0.78
heroin	0.05	0.02	0.00	0.02	0.00	0.06	0.04	0.99	0.04
methadone	0.01	0.01	0.00	0.00	0.04	0.01	0.01	0.02	0.03
opiates/synthetics	0.00	0.19	0.00	0.10	1.00	1.00	0.00	0.31	0.00
pcp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
hallucinogens	0.03	0.00	0.01	0.00	0.02	0.00	0.00	0.01	0.00
methamphetamine	0.00	0.12	0.00	0.00	0.28	0.07	1.00	0.07	0.00
amphetamines	0.02	0.01	0.05	0.01	0.03	0.01	0.01	0.09	0.04
stimulants	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.04	0.01
benzodiazepines	0.00	0.04	0.02	0.02	0.39	0.12	0.08	0.12	0.98
tranquilizers	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
barbiturates	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
sedatives/hypnotics	0.01	0.01	0.00	0.00	0.03	0.01	0.01	0.03	0.01
inhalants	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
over-the-counter	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
other drug	0.00	1.00	0.00	1.00	0.06	0.00	0.08	0.13	0.00

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, 98% used alcohol, 0% used cocaine, 98% used marijuana, 5% used heroin and so on.

Source: Substance Abuse and Mental Health Data Archive, 2012

Table 10.2 Identity Matrix for Polysubstance Abuse Clusters (Treatment Episode Data Set, 2012)

Image Matrix	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
Drug									
alcohol	1	1	1	1	0	1	1	0	1
cocaine	0	0	1	0	0	0	0	0	0
marijuana	1	0	1	1	1	0	1	0	1
heroin	0	0	0	0	0	0	0	1	0
methadone	0	0	0	0	0	0	0	0	0
opiates/synthetics	0	0	0	0	1	1	0	0	0
pcp	0	0	0	0	0	0	0	0	0
hallucinogens	0	0	0	0	0	0	0	0	0
methamphetamine	0	0	0	0	0	0	1	0	0
amphetamines	0	0	0	0	0	0	0	0	0
stimulants	0	0	0	0	0	0	0	0	0
benzodiazepines	0	0	0	0	0	0	0	0	1
tranquilizers	0	0	0	0	0	0	0	0	0
barbiturates	0	0	0	0	0	0	0	0	0
sedatives/hypnotics	0	0	0	0	0	0	0	0	0
Inhalants	0	0	0	0	0	0	0	0	0
over-the-counter	0	0	0	0	0	0	0	0	0
other drug	0	1	0	1	0	0	0	0	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, 2012

Table 10.3 Number and Percentage of Treatment Episodes within Each Cluster in Indiana (Treatment Episode Data Set, 2012)

Cluster	Number of Treatment Episodes Within Cluster	Percentage)
1 – alcohol/marijuana	3279	20.6
3 – alcohol/cocaine/marijuana	1835	11.6
8 – heroin/various other drugs	1817	11.4
7 – alcohol/marijuana/methamphetamine	1801	11.3
5 – marijuana/opiates-synthetics	1717	10.8
4 – alcohol/marijuana/other drug	1687	10.6
6 – alcohol/opiates-synthetics	1610	10.1
2 – alcohol/other drug	1527	9.6
9 – alcohol/marijuana/benzodiazepines	613	4.0
Total	15,886	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, 2012)

	Cluster 1		Cluster 2		Cluster 3		Cluster 4	
	N	%	N	%	N	%	N	%
Gender								
Male	2,499	76.2	793	51.9	1,159	63.2	1,159	68.7
Female	780	23.8	734	48.1	676	36.8	528	31.3
Race								
White	2,436	74.3	1,336	87.5	980	53.4	1,400	83.0
Black	651	19.9	160	10.5	744	40.5	223	13.2
Other	192	5.8	31	2.0	111	6.0	64	3.8
Ethnicity								
Non-Hispanic	3,100	94.5	1484	97.2	1,700	92.6	1,620	96.0
Hispanic	179	5.5	43	2.8	135	7.4	67	4.0
Age								
12 to 20	692	21.1	75	4.9	56	3.1	313	18.6
21 to 29	1,269	38.7	390	25.5	364	19.8	661	39.2
30 to 39	717	21.9	401	26.3	513	28.0	385	22.8
40 to 49	370	11.3	408	26.7	551	30.0	215	12.7
50 and Older	231	7.0	253	16.6	351	19.1	113	6.7
Education								
Less than H.S.	1,037	31.6	438	28.7	584	31.8	663	39.3
H.S. Diploma	1,521	46.4	728	47.7	848	46.2	750	44.5
Above H.S.	720	22.0	361	23.6	402	21.9	273	16.2
Unknown	1	0.0	0	0.0	1	0.1	1	0.1

	Cluster 5		Cluster 6		Cluster 7		Cluster 8		Cluster 9	
	N	%	N	%	N	%	N	%	N	%
Gender										
Male	799	46.5	970	60.2	1,082	60.1	985	54.2	349	56.9
Female	918	53.5	640	39.8	719	39.9	832	45.8	264	43.1
Race										
White	1,628	94.8	1,507	93.6	1,668	92.6	1,651	90.9	546	89.1
Black	46	2.7	53	3.3	84	4.7	112	6.2	45	7.3
Other	43	2.5	50	3.1	49	2.7	54	3.0	22	3.6
Ethnicity										
Non-Hispanic	1,682	98.0	1,580	98.1	1,749	97.1	1,716	94.4	597	97.4
Hispanic	32	2.0	30	1.9	52	2.9	101	5.6	16	2.6
Age										
12 to 20	155	9.0	150	9.3	124	6.9	226	12.4	120	19.6
21 to 29	802	46.7	626	38.9	625	34.7	897	49.4	262	42.7
30 to 39	556	32.4	451	28.0	580	32.2	474	26.1	128	20.9
40 to 49	141	8.2	253	15.7	346	19.2	141	7.8	66	10.8
50 and Older	63	3.7	130	8.1	126	7.0	79	4.3	37	6.0
Education										
Less than H.S.	517	30.1	439	27.3	643	35.7	554	30.5	190	31.0
H.S. Diploma	856	49.9	756	46.9	887	49.3	865	47.6	284	46.3
Above H.S.	342	20.0	414	25.7	271	15.0	398	21.9	139	22.7
Unknown	2	0.0	1	0.1	0	0.0	0	0.0	0	0.0

Source: Substance Abuse and Mental Health Data Archive, 2012

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, 2014)

County	Treatment Episodes	Use of 2 Substances		Use of 3 Substances		Polysubstance Abuse	
	Total	Number	Percentage	Number	Percentage	Number	Percentage
Adams	151	48	31.8	64	42.4	112	74.2
Allen	1717	623	36.3	647	37.7	1270	74.0
Bartholomew	672	186	27.7	247	36.8	433	64.4
Benton	49	10	20.4	29	59.2	39	79.6
Blackford	58	17	29.3	18	31.0	35	60.3
Boone	227	62	27.3	28	12.3	90	39.6
Brown	91	28	30.8	29	31.9	57	62.6
Carroll	102	34	33.3	47	46.1	81	79.4
Cass	277	72	26.0	163	58.8	235	84.8
Clark	475	28	5.9	57	12.0	85	17.9
Clay	189	68	36.0	68	36.0	136	72.0
Clinton	201	56	27.9	65	32.3	121	60.2
Crawford	62	14	22.6	29	46.8	43	69.4
Daviess	151	30	19.9	51	33.8	81	53.6
Dearborn	508	143	28.1	279	54.9	422	83.1
Decatur	176	63	35.8	38	21.6	101	57.4
DeKalb	241	46	19.1	93	38.6	139	57.7
Delaware	1037	301	29.0	272	26.2	573	55.3
DuBois	278	76	27.3	96	34.5	172	61.9
Elkhart	722	211	29.2	124	17.2	335	46.4
Fayette	216	48	22.2	93	43.1	141	65.3
Floyd	232	7	3.0	27	11.6	34	14.7
Fountain	57	13	22.8	29	50.9	42	73.7
Franklin	181	49	27.1	85	47.0	134	74.0
Fulton	217	71	32.7	117	53.9	188	86.6
Gibson	228	63	27.6	90	39.5	153	67.1
Grant	495	132	26.7	235	47.5	367	74.1
Greene	201	59	29.4	68	33.8	127	63.2
Hamilton	987	308	31.2	195	19.8	503	51.0
Hancock	207	75	36.2	52	25.1	127	61.4
Harrison	36	<5	N/A	8	22.2	<5	N/A
Hendricks	365	79	21.6	66	18.1	145	39.7
Henry	358	129	36.0	98	27.4	227	63.4
Howard	683	188	27.5	360	52.7	548	80.2
Huntington	97	26	26.8	48	49.5	74	76.3
Jackson	323	72	22.3	110	34.1	182	56.3
Jasper	111	31	27.9	55	49.5	86	77.5
Jay	98	38	38.8	24	24.5	62	63.3
Jefferson	380	73	19.2	121	31.8	194	51.1
Jennings	288	61	21.2	86	29.9	147	51.0
Johnson	239	84	35.1	83	34.7	167	69.9
Knox	309	73	23.6	69	22.3	142	46.0
Kosciusko	270	75	27.8	132	48.9	207	76.7
LaGrange	165	34	20.6	98	59.4	132	80.0
Lake	2671	723	27.1	507	19.0	1230	46.1
LaPorte	557	174	31.2	117	21.0	291	52.2

(continued on next page)

APPENDIX 10A (Continued from previous page)

County	Treatment Episodes	Use of 2 Substances		Use of 3 Substances		Polysubstance Abuse	
	Total	Number	Percentage	Number	Percentage	Number	Percentage
Lawrence	474	104	21.9	77	16.2	181	38.2
Madison	1064	318	29.9	289	27.2	607	57.0
Marion	4375	1306	29.9	1459	33.3	2765	63.2
Marshall	255	69	27.1	88	34.5	157	61.6
Martin	51	11	21.6	22	43.1	33	64.7
Miami	305	96	31.5	159	52.1	255	83.6
Monroe	1364	431	31.6	361	26.5	792	58.1
Montgomery	317	96	30.3	112	35.3	208	65.6
Morgan	477	123	25.8	130	27.3	253	53.0
Newton	38	5	13.2	20	52.6	25	65.8
Noble	220	65	29.5	103	46.8	168	76.4
Ohio	44	13	29.5	20	45.5	33	75.0
Orange	139	50	36.0	43	30.9	93	66.9
Owen	203	48	23.6	40	19.7	88	43.3
Parke	97	29	29.9	24	24.7	53	54.6
Perry	133	34	25.6	55	41.4	89	66.9
Pike	43	11	25.6	10	23.3	21	48.8
Porter	709	189	26.7	282	39.8	471	66.4
Posey	133	30	22.6	59	44.4	89	66.9
Pulaski	119	36	30.3	71	59.7	107	89.9
Putnam	229	97	42.4	68	29.7	165	72.1
Randolph	192	52	27.1	61	31.8	113	58.9
Ripley	249	66	26.5	94	37.8	160	64.3
Rush	160	55	34.4	62	38.8	117	73.1
Saint Joseph	1543	536	34.7	420	27.2	956	62.0
Scott	130	9	6.9	17	13.1	26	20.0
Shelby	157	29	18.5	47	29.9	76	48.4
Spencer	169	34	20.1	84	49.7	118	69.8
Starke	247	56	22.7	150	60.7	206	83.4
Steuben	214	75	35.0	89	41.6	164	76.6
Sullivan	80	17	21.3	39	48.8	56	70.0
Switzerland	67	21	31.3	29	43.3	50	74.6
Tippecanoe	453	128	28.3	193	42.6	321	70.9
Tipton	65	21	32.3	26	40.0	47	72.3
Union	40	12	30.0	19	47.5	31	77.5
Vanderburgh	1377	356	25.9	515	37.4	871	63.3
Vermillion	114	42	36.8	45	39.5	87	76.3
Vigo	729	229	31.4	340	46.6	569	78.1
Wabash	244	73	29.9	115	47.1	188	77.0
Warren	21	7	33.3	9	42.9	16	76.2
Warrick	328	66	20.1	143	43.6	209	63.7
Washington	95	<5	N/A	15	15.8	<5	N/A
Wayne	455	141	31.0	153	33.6	294	64.6
Wells	127	39	30.7	53	41.7	92	72.4
White	161	44	27.3	78	48.4	122	75.8
Whitley	104	15	14.4	75	72.1	90	86.5
Indiana	35665	10089	28.3	11780	33.0	21869	61.3

Note: The category "Polysubstance Abuse" is an aggregate of "Use of 2 Substances" and "Use of 3 Substances." We calculated the percentages by dividing the number of reported polysubstance abuse by the number of treatment episodes.

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

Source: Indiana Family and Social Services Administration, 2015

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, 2014)

County	Cluster #	Cluster Composition	N	%
Adams				
	2	Alcohol/marijuana	41	36.6
	3	Alcohol/marijuana/other drug	28	25.0
	1	Alcohol/marijuana/opiates-synthetics	16	14.3
	4	Alcohol/cocaine/marijuana	15	13.4
	5	Cocaine/marijuana/opiates-synthetics	12	10.7
		Total	112	
Allen				
	1	Alcohol/marijuana	461	36.3
	2	Alcohol/marijuana/other drug	198	15.6
	3	Alcohol/cocaine/marijuana	190	15.0
	4	Alcohol/other drug	167	13.1
	5	Alcohol/marijuana/opiates-synthetics	150	11.8
	6*	Cocaine/heroin/opiates-synthetics	104	8.2
		Total	1,270	
Bartholomew				
	2	Marijuana/opiates-synthetics	139	32.1
	1	Alcohol/marijuana/methamphetamine	106	24.5
	4	Alcohol/marijuana	104	24.0
	3	Alcohol/methamphetamine	84	19.4
		Total	433	
Benton				
	1	Alcohol/marijuana/other drug	18	46.2
	2	Alcohol/marijuana	15	38.5
	3	Marijuana/methamphetamine	6	15.4
		Total	39	
Blackford				
	1	Alcohol/marijuana/opiates-synthetics	22	62.9
	2	Alcohol/marijuana/other drug	13	37.1
		Total	35	
Boone				
	2	Marijuana/heroin	47	52.2
	1	Alcohol/marijuana	43	47.8
		Total	90	
Brown				
	1	Alcohol/marijuana	42	73.7
	2	Marijuana/heroin/opiates-synthetics	15	26.3
		Total	57	
Carroll				
	1	Alcohol/marijuana/other drug	30	37.0
	4	Alcohol/marijuana	19	23.5
	2*	Alcohol/marijuana/opiates-synthetics	16	19.8
	3	Marijuana/heroin/methamphetamine	16	19.8
		Total	81	
Cass				
	3	Alcohol/marijuana/other drug	73	31.1
	1	Alcohol/marijuana	72	30.6
Cass (cont.)	2	Alcohol/other drug	56	23.8
	4*	Alcohol/marijuana/opiates-synthetics	34	14.5
		Total	235	
Clark				
	2	Alcohol/marijuana	34	40.0
	3	Marijuana/opiates-synthetics	30	35.3
	1	Alcohol/cocaine	21	24.7
		Total	85	
Clay				
	3	Alcohol/marijuana/methamphetamine	31	22.8
	5	Marijuana/other drug	31	22.8
	1	Alcohol/marijuana/other drug	28	20.6
	2	Alcohol/other drug	27	19.9
	4	Methamphetamine/other drug	19	14.0
		Total	136	
Clinton				
	1*	Alcohol/opiates-synthetics	54	44.6
	2	Alcohol/marijuana/other drug	35	28.9
	3	Alcohol/marijuana	32	26.4
		Total	121	
Crawford				
	1	Alcohol/methamphetamine	18	40.0
	2	Marijuana/opiates-synthetics/methamphetamine	14	31.1
	3	Alcohol/marijuana	13	28.9
		Total	45	
Daviess				
	1	Marijuana/methamphetamine	30	37.0
	3	Opiates-synthetics/methamphetamine	26	32.1
	2	Alcohol/marijuana/other drug	25	30.9
		Total	81	
Dearborn				
	3	Marijuana/heroin/opiates-synthetics	145	34.2
	2	Alcohol/marijuana	141	33.3
	1	Alcohol/other drug	138	32.5
		Total	424	
Decatur				
	1	Alcohol/marijuana	46	45.5
	4	Alcohol/marijuana/opiates-synthetics	22	21.8
	3	Marijuana/methamphetamine	21	20.8
	2	Alcohol/cocaine/methamphetamine	12	11.9
		Total	101	
Dekalb				
	1	Alcohol/marijuana	44	31.7
	3	Alcohol/marijuana/other drug	27	19.4
	4	Marijuana/methamphetamine	26	18.7
	5	Marijuana/opiates-synthetics	22	15.8

(continued on next page)

APPENDIX 10B (continued from previous page)

County	Cluster #	Cluster Composition	N	%
Dekalb (cont.)	2	Alcohol/marijuana/ methamphetamine	20	14.4
		Total	139	
Delaware				
	1	Alcohol/marijuana	144	25.1
	2	Marijuana/opiates- synthetics	93	16.2
	6	Marijuana/heroin/opiates- synthetics	82	14.3
	7	Opiates-synthetics/ methamphetamine	70	12.2
	3	Alcohol/cocaine/ marijuana	68	11.9
	4	Opiates-synthetics/ benzodiazepines	63	11.0
	5	Alcohol/opiates-synthetics	53	9.2
		Total	573	
Dubois				
	1	Alcohol/marijuana	77	44.8
	3	Marijuana/opiates- synthetics	49	28.5
	2	Alcohol/marijuana/ methamphetamine	46	26.7
		Total	172	
Elkhart				
	2	Alcohol/marijuana	115	34.3
	5	Marijuana/opiates- synthetics	60	17.9
	1	Marijuana/ methamphetamine	48	14.3
	3	Alcohol/cocaine/ marijuana	43	12.8
	4	Marijuana/other drug	40	11.9
	6	Marijuana/heroin	29	8.7
		Total	335	
Fayette				
	1	Alcohol/marijuana	29	20.6
	5	Marijuana/ benzodiazepines	27	19.1
	6	Heroin/opiates-synthetics	25	17.7
	2	Marijuana/heroin	20	14.2
	3	Alcohol/cocaine	20	14.2
	4	Alcohol/marijuana/ opiates-synthetics	20	14.2
		Total	141	
Floyd				
	1	Alcohol/marijuana	17	50.0
	2	Marijuana/opiates- synthetics	17	50.0
		Total	34	
Fountain				
	2	Marijuana/opiates- synthetics	23	54.8
	1	Alcohol/marijuana/other drug	19	45.2
		Total	42	
Franklin				
	2	Alcohol/marijuana	41	30.6
	5	Alcohol/other drug	28	20.9
	3	Alcohol/opiates-synthetics	23	17.2
	4	Heroin/opiates-synthetics	23	17.2
	1	Alcohol/marijuana/ opiates-synthetics	19	14.2
		Total	134	
Fulton				29.8
	1	Alcohol/marijuana/other drug	56	22.3

County	Cluster #	Cluster Composition	N	%
Fulton (cont.)	5	Alcohol/marijuana	42	19.7
	4	Alcohol/marijuana/ methamphetamine	37	17.6
	2	Marijuana/ methamphetamine	33	10.6
	3	Opiates-synthetics/other drug	20	
		Total	188	
Gibson				
	2	Alcohol/marijuana	51	33.3
	1	Alcohol/other drug	39	25.5
	3	Marijuana/opiates- synthetics	32	20.9
	4	Alcohol/marijuana/other drugs	31	20.3
		Total		
Grant				
	1	Alcohol/marijuana	93	25.3
	4	Alcohol/marijuana/other drug	75	20.4
	5	Marijuana/opiates- synthetics	50	13.6
	2*	Alcohol/opiates- synthetics/ benzodiazepines	49	13.4
	6	Alcohol/other drug	42	11.4
	3	Alcohol/marijuana/ opiates-synthetics	36	9.8
	7	Cocaine/marijuana	22	6.0
		Total	367	
Greene				
	1	Alcohol/marijuana/ methamphetamine	32	25.2
	3	Alcohol/marijuana	28	22.0
	5*	Alcohol/opiates- synthetics/ methamphetamine	25	19.7
	4	Marijuana/opiates- synthetics	23	18.1
	2	Alcohol/other drug	19	15.0
		Total	127	
Hamilton				
	1	Alcohol/marijuana	209	41.6
	6	Marijuana/heroin	63	12.5
	4	Alcohol/marijuana/ opiates-synthetics	46	9.1
	7	Alcohol/marijuana/other drug	43	8.5
	2	Alcohol/opiates-synthetics	42	8.3
	5	Alcohol/cocaine	40	8.0
	3	Alcohol/cocaine/ marijuana	36	7.2
	8	Marijuana/ benzodiazepines	24	4.8
		Total	503	
Hancock				
	1	Alcohol/marijuana	52	40.9
	2	Marijuana/opiates- synthetics	29	22.8
	3	Alcohol/opiates-synthetics	24	18.9
	4	Cocaine/heroin	22	17.3
		Total	127	
Harrison		Insufficient cases for analysis		

(continued on next page)

APPENDIX 10B (continued from previous page)

County	Cluster #	Cluster Composition	N	%
Hendricks				
	1*	Opiates-synthetics/other drug	53	36.6
	3	Alcohol/marijuana	51	35.2
	2	Marijuana/heroin	41	28.3
		Total	145	
Henry				
	3	Alcohol/marijuana	85	37.4
	2	Alcohol/marijuana/ opiates-synthetics	58	25.6
	1	Opiates-synthetics/other drug	46	20.3
	4	Opiates-synthetics/ benzodiazepines	38	16.7
		Total	227	
Howard				
	6	Alcohol/marijuana/other drug	110	20.1
	1	Marijuana/opiates-synthetics	87	15.9
	2	Alcohol/marijuana	72	13.1
	4	Heroin/opiates-synthetics/ other drug	69	12.6
	5	Opiates-synthetics/ benzodiazepines	57	10.4
	8	Opiates-synthetics/ methamphetamine	55	10.0
	3	Alcohol/cocaine/ marijuana	50	9.1
	7	Alcohol/marijuana/ opiates-synthetics	48	8.8
		Total	548	
Huntington				
	2	Alcohol/marijuana/other drug	27	36.5
	3	Opiates-synthetics/other drug	27	36.5
	1	Alcohol/marijuana	20	27.0
		Total	74	
Jackson				
	1	Alcohol/marijuana	60	33.0
	3	Marijuana/ methamphetamine	50	27.5
	2	Marijuana/ opiates-synthetics/ methamphetamine	40	22.0
	4	Alcohol/ methamphetamine	32	17.5
		Total	182	
Jasper				
	2	Heroin/opiates-synthetics	50	58.1
	1	Alcohol/marijuana/other drug	36	41.9
		Total	86	
Jay				
	3	Alcohol/marijuana	32	51.6
	1	Marijuana/ methamphetamine	16	25.8
	2	Heroin/opiates-synthetics	14	22.6
		Total	62	
Jefferson				
	1	Alcohol/marijuana	72	37.1
	2	Marijuana/ methamphetamine	67	34.5
	3	Marijuana/opiates-synthetics	55	28.4
		Total	194	

County	Cluster #	Cluster Composition	N	%
Jennings				
	2	Marijuana/ methamphetamine	47	32.0
	3	Marijuana/opiates-synthetics	35	23.8
	4	Alcohol/marijuana	34	23.1
	1	Alcohol/ methamphetamine	31	21.1
		Total	147	
Johnson				
	3	Alcohol/marijuana	65	38.9
	2	Marijuana/opiates-synthetics	29	17.4
	1	Heroin/opiates-synthetics/ other drug	27	16.2
	4†	Heroin/various other drugs	23	13.8
	5	Alcohol/cocaine/ marijuana	23	13.8
		Total	167	
Knox				
	3	Alcohol/ methamphetamine	43	30.3
	1	Marijuana/ methamphetamine	33	23.2
	2	Opiates-synthetics/ benzodiazepines	33	23.2
	4	Alcohol/marijuana	33	23.2
		Total	142	
Kosciusko				
	3	Alcohol/marijuana	69	33.3
	4	Alcohol/other drug	54	26.1
	1	Alcohol/marijuana/other drug	48	23.2
	2	Marijuana/other drug	36	17.4
		Total	207	
LaGrange				
	2	Alcohol/marijuana/other drug	51	38.6
	3	Alcohol/other drug	41	31.1
	1	Alcohol/marijuana/ methamphetamine	40	30.3
		Total	132	
Lake				
	1	Alcohol/marijuana	402	32.7
	5	Alcohol/cocaine/ marijuana	261	21.2
	3	Alcohol/marijuana/other drug	204	16.6
	4	Marijuana/heroin	186	15.1
	2	Opiates-synthetics/ various other drugs	177	14.4
		Total	1,230	
LaPorte				
	1	Alcohol/marijuana	85	29.2
	4	Marijuana/heroin	68	23.4
	3	Alcohol/opiates-synthetics	53	18.2
	2	Heroin/opiates-synthetics	43	14.8
	5	Alcohol/cocaine	42	14.4
		Total	291	
Lawrence				
	2	Marijuana/ opiates-synthetics/ methamphetamine	109	60.2
	1	Alcohol/marijuana	72	39.8
		Total	181	
Madison				
	1	Alcohol/marijuana	182	30.0

(continued on next page)

APPENDIX 10B (continued from previous page)

County	Cluster #	Cluster Composition	N	%
Madison (cont.)	2	Marijuana/opiate-synthetics	146	24.1
	4	Cocaine/marijuana/other drug	105	17.3
	5	Alcohol/marijuana/opiate-synthetics	101	16.6
	3	Alcohol/cocaine/marijuana	73	12.0
		Total	607	
Marion				
	4	Alcohol/marijuana	617	22.3
	3	Alcohol/cocaine/marijuana	617	22.3
	1	Opiate-synthetics/other drug	524	19.0
	2	Marijuana/heroin	358	12.9
	6	Heroin/opiates-synthetics/other drug	328	11.9
	5	Alcohol/marijuana/other drug	321	11.6
		Total	2,765	
Marshall				
	1	Alcohol/marijuana	52	33.1
	2	Alcohol/marijuana/other drug	47	29.9
	3	Alcohol/other drug	38	24.2
	4*	Marijuana/heroin/methamphetamine	20	12.7
		Total	157	
Martin				
	1	Marijuana/methamphetamine	19	57.6
	2	Alcohol/marijuana	14	42.4
		Total	33	
Miami				
	2	Alcohol/marijuana	80	31.4
	1	Alcohol/marijuana/other drug	66	25.9
	3	Alcohol/other drug	58	22.7
	4	Marijuana/opiates-synthetics	51	20.0
		Total	255	
Monroe				
	1	Alcohol/marijuana	260	32.8
	4*	Heroin/opiates-synthetics	117	14.8
	3	Marijuana/opiates-synthetics	115	14.5
	8	Marijuana/benzodiazepines	70	8.8
	2	Marijuana/methamphetamine	65	8.2
	5	Alcohol/cocaine/marijuana	56	7.1
	6	Alcohol/marijuana/methamphetamine	56	7.1
	7	Marijuana/heroin	53	6.7
		Total	792	
Montgomery				
	1	Alcohol/marijuana/other drug	75	36.1
	4	Marijuana/methamphetamine	51	24.5
	2*	Heroin/opiates-synthetics	45	21.6
	3	Alcohol/marijuana	37	17.8
		Total	208	
Morgan				
	2	Alcohol/marijuana	74	29.2

County	Cluster #	Cluster Composition	N	%
Morgan (cont.)	3	Marijuana/methamphetamine	67	26.5
	4*	Opiates-synthetics/methamphetamine	67	26.5
	1	Marijuana/heroin	45	17.8
		Total	253	
Newton				
	1	Alcohol/marijuana	13	52.0
	2	Heroin/opiates-synthetics/methamphetamine	12	48.0
		Total	25	
Noble				
	1	Alcohol/marijuana	64	38.1
	3	Alcohol/other drug	54	32.1
	2	Marijuana/methamphetamine/other drug	50	29.8
		Total	168	
Ohio				
	2	Alcohol/marijuana/other drug	20	60.6
	1†	Opiates-synthetics/various other drugs	13	39.4
		Total	33	
Orange				
	1	Alcohol/marijuana	35	37.6
	2	Marijuana/opiates-synthetics	34	36.6
	3	Marijuana/methamphetamine	24	25.8
		Total	93	
Owen				
	1	Alcohol/marijuana	47	53.4
	2	Marijuana/methamphetamine	41	46.6
		Total	88	
Parke				
	2	Alcohol/other drug	23	43.4
	1	Alcohol/marijuana	15	28.3
	3	Marijuana/methamphetamine	15	28.3
		Total	53	
Perry				
	1	Alcohol/marijuana	30	33.7
	3	Alcohol/marijuana/methamphetamine	24	27.0
	4	Marijuana/opiates-synthetics/benzodiazepines	20	22.5
	2	Alcohol/methamphetamine	15	16.9
		Total	89	
Pike				
	1	Alcohol/marijuana	11	52.4
	3	Opiates-synthetics/methamphetamine	6	28.6
	2	Alcohol/other drug	4	19.0
		Total	21	
Porter				
	3	Alcohol/marijuana/other drug	184	39.1
	2	Alcohol/marijuana	148	31.4
	1	Heroin/opiates-synthetics	139	29.5
		Total	471	
Posey				
	2	Alcohol/marijuana/methamphetamine	35	39.3

(continued on next page)

APPENDIX 10B (continued from previous page)

County	Cluster #	Cluster Composition	N	%
Posey (cont.)	1	Alcohol/marijuana/other drug	33	37.1
	3	Alcohol/opiates-synthetics	21	23.6
		Total	89	
Pulaski				
	3	Alcohol/marijuana	28	26.2
	1	Alcohol/marijuana/other drug	27	25.2
	2	Alcohol/other drug	27	25.2
	4	Opiates-synthetics/other drug	25	23.4
		Total	107	
Putnam				
	1	Marijuana/methamphetamine/other drug	64	38.8
	2	Alcohol/other drug	54	32.7
	3	Alcohol/marijuana	47	28.5
		Total	165	
Randolph				
	1	Alcohol/marijuana	52	46.0
	2	Marijuana/heroin	39	34.5
	3	Alcohol/opiates-synthetics	22	19.5
		Total	113	
Ripley				
	1	Alcohol/marijuana	53	33.1
	3	Alcohol/marijuana/opiates-synthetics	38	23.8
	4	Marijuana/heroin	37	23.1
	2	Alcohol/other drug	32	20.0
		Total	160	
Rush				
	1	Alcohol/marijuana	45	38.5
	2	Marijuana/opiates-synthetics	27	23.1
	3	Alcohol/marijuana/other drug	23	19.7
	4	Alcohol/marijuana/methamphetamine	22	18.8
		Total	117	
Saint Joseph				
	4	Alcohol/marijuana	295	30.9
	2	Alcohol/cocaine	245	25.6
	1	Cocaine/marijuana	144	15.1
	5	Marijuana/opiates-synthetics	143	15.0
	3	Heroin/methamphetamine	129	13.5
		Total	956	
Scott		Insufficient cases for analysis		
Shelby				
	1	Alcohol/marijuana	38	50.0
	2	Marijuana/opiates-synthetics	38	50.0
		Total	76	
Spencer				
	1	Alcohol/marijuana	45	38.1
	2	Alcohol/marijuana/methamphetamine	44	37.3
	3	Marijuana/methamphetamine	29	24.6
		Total	118	
Starke				
	4	Marijuana/methamphetamine	53	25.7

County	Cluster #	Cluster Composition	N	%
Starke (cont.)	5	Opiates-synthetics/other drug	49	23.8
	2	Opiates-synthetics/methamphetamine	40	19.4
	3	Alcohol/other drug	40	19.4
	1	Alcohol/marijuana/opiates-synthetics	24	11.7
		Total	206	
Steuben				
	3	Alcohol/other drug	57	34.8
	1	Alcohol/marijuana/other drug	56	34.1
	2	Marijuana/methamphetamine	51	32.0
		Total	164	
Sullivan				
	1	Alcohol/marijuana	40	71.4
	2	Marijuana/methamphetamine	16	28.6
		Total	56	
Switzerland				
	1	Alcohol/other drug	31	62.0
	2	Marijuana/heroin/opiates-synthetics/other drug	19	38.0
		Total	50	
Tippecanoe				
	1	Alcohol/marijuana/other drug	91	28.3
	2	Alcohol/marijuana	61	19.0
	4	Alcohol/marijuana/opiates-synthetics	50	15.6
	6†	Heroin/various other drugs	50	15.6
	3	Alcohol/cocaine/marijuana	38	11.8
	5	Marijuana/methamphetamine	31	9.7
		Total	321	
Tipton				
	2	Alcohol/marijuana	19	40.4
	3†	Opiates-synthetics/various other drugs	16	34.0
	1	Marijuana/other drug	12	25.5
		Total	47	
Union				
	2	Heroin/opiates-synthetics	19	61.3
	1	Alcohol/marijuana	12	38.7
		Total	31	
Vanderburgh				
	2	Alcohol/marijuana/methamphetamine	268	30.8
	3	Alcohol/marijuana	244	28.0
	1	Alcohol/other drug	190	21.8
	4	Opiates-synthetics/benzodiazepines	169	19.4
		Total	871	
Vermillion				
	4	Alcohol/other drug	29	33.3
	2	Marijuana/methamphetamine	23	26.4
	1	Alcohol/marijuana	18	20.7
	3	Opiates-synthetics/other drug	17	19.5
		Total	87	
Vigo				
	6	Marijuana/methamphetamine/other drug	83	14.6

(continued on next page)

APPENDIX 10B (continued from previous page)

County	Cluster #	Cluster Composition	N	%
Vigo (cont.)	5	Alcohol/other drug	82	14.4
	2	Alcohol/marijuana/ methamphetamine	81	14.2
	3	Alcohol/marijuana	79	13.9
	1	Alcohol/marijuana/other drug	68	12.0
	4	Marijuana/ methamphetamine	68	12.0
	8†	Opiates-synthetics/ various other drugs	55	9.7
	7	Methamphetamine/other drug	53	9.3
		Total	569	
Wabash				
	1	Alcohol/marijuana	71	37.8
	3	Alcohol/other drug	48	25.5
	2	Opiates-synthetics/other drug	45	23.9
	4	Heroin/methamphetamine	24	12.8
		Total	188	
Warren				
	1	Alcohol/other drug	8	50.0
	2	Alcohol/opiates-synthetics	8	50.0
		Total	16	
Warrick				
	3	Alcohol/ methamphetamine	57	27.3
	1	Alcohol/marijuana/ methamphetamine	44	21.1
	2	Alcohol/marijuana	42	20.1
	4	Alcohol/marijuana/other drug	36	17.2
	5	Marijuana/opiates- synthetics	30	14.4
		Total	209	
Washington				
	1	Heroin/benzodiazepines	9	53.0
	2	Marijuana/ opiates-synthetics/ methamphetamine	8	47.0
		Total	17	

County	Cluster #	Cluster Composition	N	%
Wayne				
	1	Alcohol/marijuana	59	18.9
	4	Heroin/opiates-synthetics	48	15.4
	2	Alcohol/cocaine	41	13.1
	6	Marijuana/heroin	39	12.5
	3	Cocaine/heroin	31	9.9
	8	Marijuana/opiates- synthetics	31	9.9
	5	Alcohol/marijuana/other drug	29	9.3
	7*	Opiates-synthetics/ Benzodiazepines	16	5.1
		Total	312	
Wells				
	1	Alcohol/marijuana	42	45.7
	3	Marijuana/ opiates-synthetics/ methamphetamine	22	23.9
	2	Alcohol/marijuana/other drug	16	17.4
	4	Alcohol/marijuana/ opiates-synthetics	12	13.0
		Total	92	
White				
	4	Alcohol/marijuana	40	32.8
	3	Alcohol/marijuana/other drug	34	27.9
	2	Marijuana/opiates- synthetics	26	21.3
	1	Alcohol/other drug	22	18.0
		Total	122	
Whitley				
	1	Alcohol/marijuana/other drug	36	40.0
	4	Alcohol/marijuana	21	23.3
	3	Marijuana/ opiates-synthetics/ methamphetamine	17	18.9
	2	Alcohol/other drug	16	17.8
		Total	90	

Note: Results from the county-level cluster analysis differ from the state-level findings.

*Due to the small sample size and/or the nature of the data this cluster was composed of one drug where at least 50% of individuals reported using 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, 2015

REFERENCES, CHAPTER 10

- Collins, R. L., Ellickson, P. L., & Bell, R. M. (1998). Simultaneous polydrug use among teens: Prevalence and predictors. *Journal of Substance Abuse*, 10(3), 233–253.
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis: With readings*. Upper Saddle River, NJ: Prentice-Hall, Inc.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Indianapolis, IN: Indiana Family and Social Services Administration.
- Substance Abuse and Mental Health Data Archive. (2012). *Treatment Episode Data Set - Admissions (TEDS-A), 2012*. Retrieved from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/browse>

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, 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).

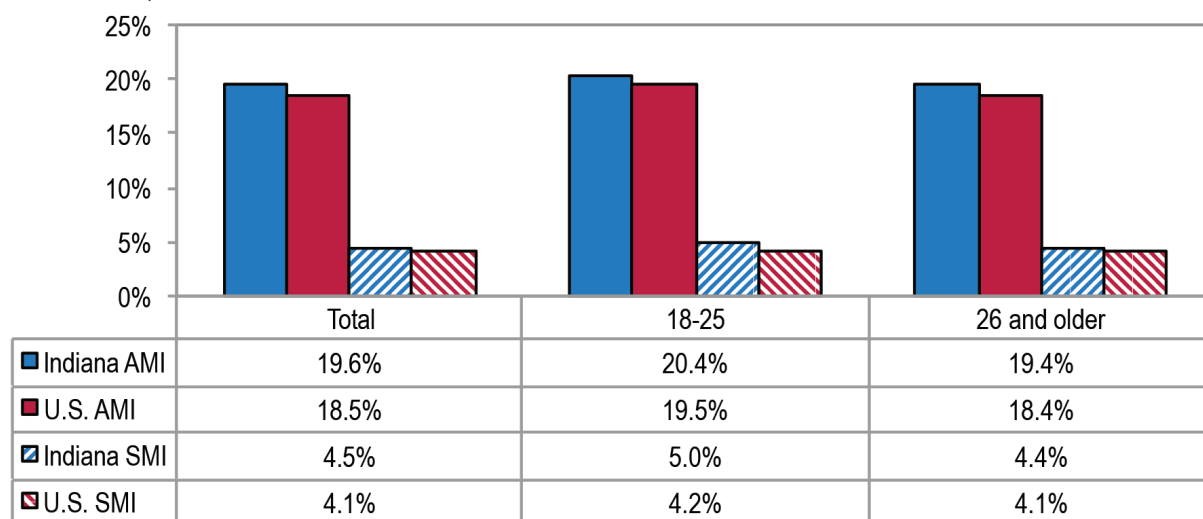
For this chapter, we compiled available state-level data on indicators related to mental health. Definitions of specific terms can be found in Appendix 11A, pages 198-199.

PREVALENCE OF PSYCHOLOGICAL DISTRESS IN INDIANA

General Prevalence

In 2013, a total of 19.6% Indiana adults reported having any mental illness (AMI) in the past year (95% CI [Confidence Interval]: 17.4-22.0), which was statistically similar to the U.S. percentage of 18.5% (95% CI: 18.1-19.0). 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.: 4.1%, 95% CI: 3.9-4.4). There were no differences in AMI or SMI by age group (see Figure 11.1) (Substance Abuse and Mental Health Services Administration, 2014).

Figure 11.1 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year, by Age Group (National Survey on Drug Use and Health, 2013)

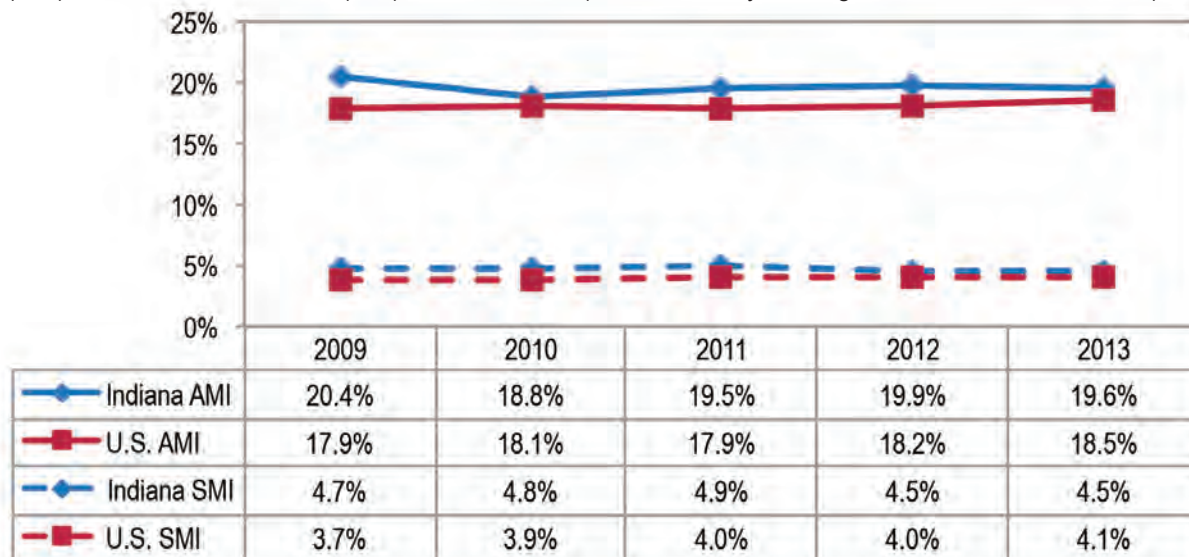


Source: Substance Abuse and Mental Health Services Administration, 2014

For adults ages 18 and older, past-year prevalence of AMI or SMI did not differ significantly from 2009 to 2013 in Indiana or the nation. Also, Indiana and U.S. rates were comparable (see Figure 11.2) (Substance Abuse and Mental Health Services Administration, 2014).

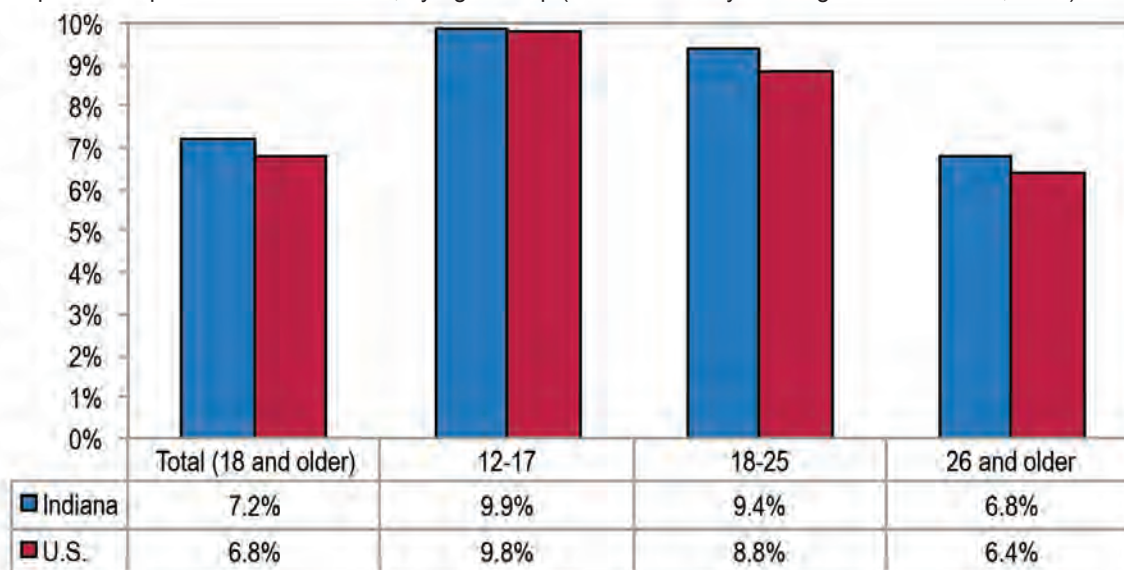
In 2013, 7.2% of Indiana adults (95% CI: 6.0-8.7) reported having had at least one major depressive episode (MDE) in the past year, which was similar to the United States (6.8%, 95% CI: 6.5-7.0). Indiana rates did not differ by age group (see Figure 11.3) (Substance Abuse and Mental Health Services Administration, 2014).

Figure 11.2 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year (National Survey on Drug Use and Health, 2009-2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

Figure 11.3 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting at Least One Major Depressive Episode in the Past Year, by Age Group (National Survey on Drug Use and Health, 2013)



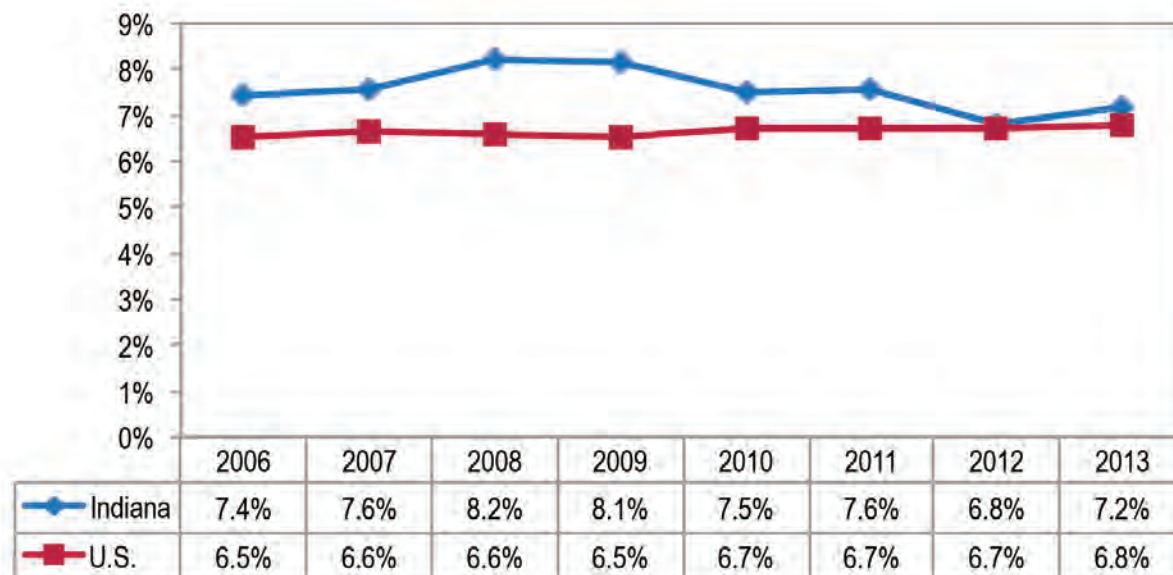
Note: There are minor wording differences in the questions in the adult and adolescent MDE modules. Therefore, data from youths aged 12 to 17 were not combined with data from persons aged 18 or older to produce the total MDE estimate.

Source: Substance Abuse and Mental Health Services Administration, 2014

In Indiana and the United States, the percentage of adults with a major depressive episode did not change from 2006-2013, 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, 2014).

According to the 2013 Behavioral Risk Factor Surveillance System (BRFSS), 19.5% of adults in Indiana reported ever being told that they had depression, which is similar to the United States. Within Indiana, history of depression was greatest among females and those who identified as multiracial (see Table 11.1) (Centers for Disease Control and Prevention, 2013).

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, 2006-2013)



Source: Substance Abuse and Mental Health Services Administration, 2014

Table 11.1 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting a History of Depression (Behavioral Risk Factor Surveillance System, 2013)

		Indiana (95% CI)	U.S.
Gender	Male	13.1% (11.7-14.4)	13.8%
		13.6%	24.8% (23.2-26.4)
Race/Ethnicity	Female	25.7% (24.1-27.2)	23.9%
	White	20.5% (19.4-21.7)	20.1%
	Black	13.3% (10.0-16.7)	15.3%
	Hispanic	12.1% (8.0-16.2)	18.9%
	Other	15.9% (9.3-22.4)	15.0%
	Multiracial	28.8% (18.2-39.4)	31.4%
Age Group	18-24	17.9% (14.0-21.7)	15.6%
	25-34	20.1% (17.1-23.1)	19.6%
	35-44	20.2% (17.6-22.9)	20.0%
	45-54	21.3% (19.0-23.5)	21.6%
	55-64	21.8% (19.8-23.8)	21.8%
	65+	15.9% (14.4-17.9)	14.8%
Total		19.5% (18.5-20.5)	18.7%

Source: Centers for Disease Control and Prevention, 2013

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 Indiana Youth Survey (Gassman, Jun, Samuel, Agle, Lee, Crane, Boyken, et al., 2014) 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)

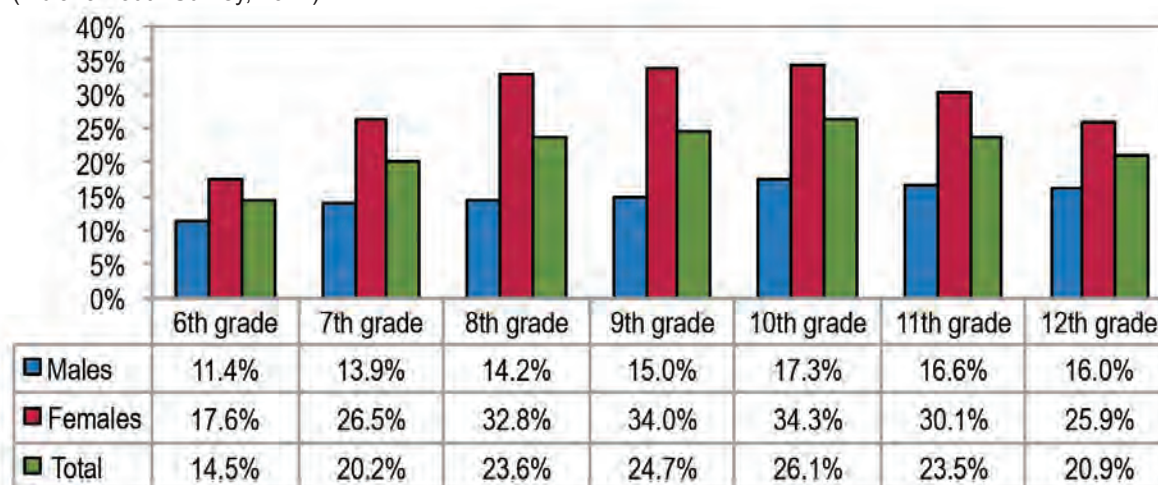
However, a higher percentage of Indiana students experienced being bullied on school property (25.0%, 95% CI: 22.3-27.9) compared to their U.S. counterparts (20.1%; 95% CI: 18.7-21.5) (Centers for Disease Control and Prevention, 1999-2011).

CONSEQUENCES

Treatment

In the United States, there were 5.1 million adults aged 18 or older who had a perceived unmet need for mental health care in 2013. The most commonly cited reason reported for not receiving mental health services was an inability to afford the costs of care (48.3%). Additionally, there were 7.7 million adults in the U.S. in 2013 that had a co-occurring mental illness and substance abuse disorder. Out of those with co-occurring disorders, 47.8% received either mental health care or substance use treatment, with 7.7 percent receiving both mental health care and specialty substance abuse treatment (Substance Abuse and Mental Health Services Administration, 2014).

Figure 11.5 Percentage of Indiana Students (Grades 6 through 12) Reporting Feeling Sad or Hopeless (Indiana Youth Survey, 2014)



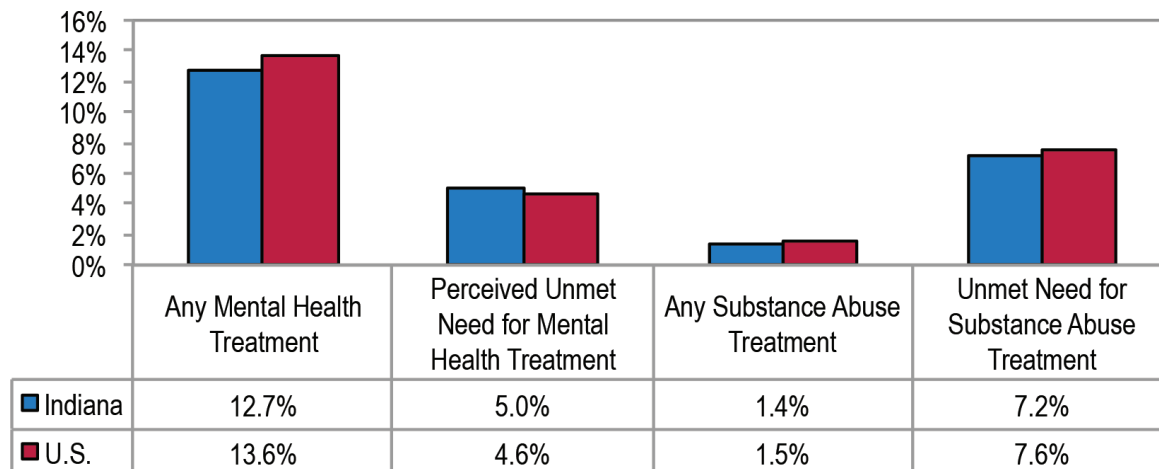
Source: Gassman, et al., 2014

In 2011, the percentages of adults receiving any mental health treatment or any substance abuse treatment were similar in Indiana and the United States, as was the perceived unmet need for both mental health and substance abuse treatment (see Figure 11.6).

The percentages of adolescents using outpatient, inpatient (residential), or no specialty medical treatment for mental health issues were similar between Indiana

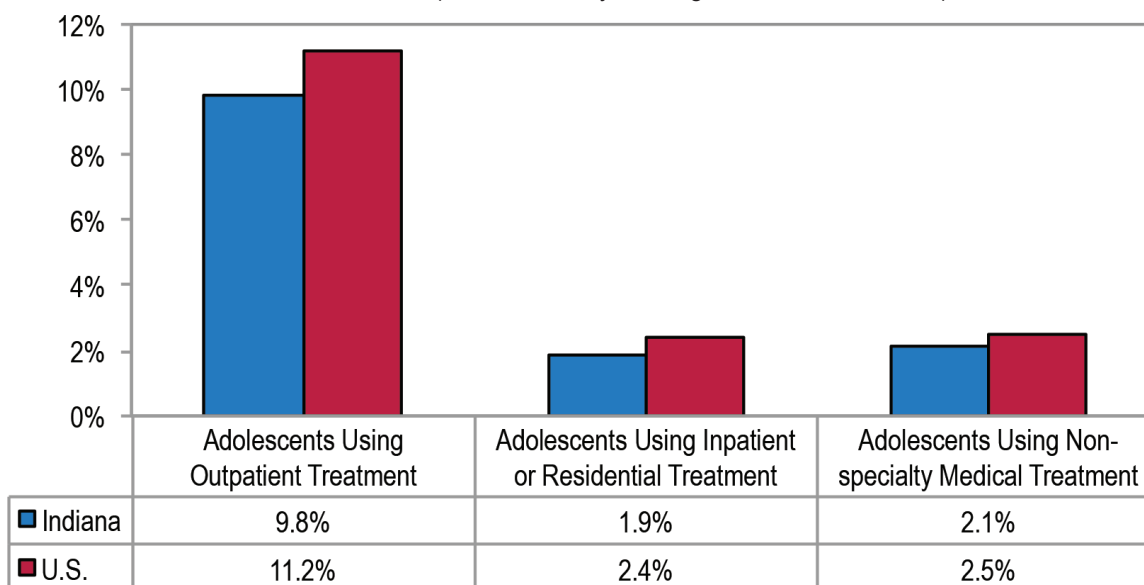
and the United States (see Figure 11.7). While treatment rates were similar, the per capita revenue of mental health treatment centers was lower in Indiana (\$84.90) than the national average (\$127.22) (Substance Abuse and Mental Health Services Administration, 2013a). Current NSDUH data do not include comparisons at the state level.

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



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)



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

Table 11.3 Demographic Characteristics of Clients by Serious Mental Illness (SMI), Substance Use Disorder (SUD), and Co-occurring Disorder (COD) Diagnosis (DARMHA, 2014)

		SMI	SUD	COD
Gender	Male	48.9% (48.6-49.3)	34.4% (34.0-34.7)	13.5% (13.3-13.7)
	Female	68.1 (67.8-68.4)	24.9% (24.6-25.2)	12.9% (12.7-13.2)
Race	White	59.3% (59.0-59.6)	30.2% (29.9-30.4)	13.2% (13.0-13.4)
	Black	56.3% (55.6-56.9)	29.2% (28.6-29.8)	14.5% (14.0-14.9)
	Other	53.9% (53.0-54.9)	24.1% (23.3-25.0)	10.1% (9.9-11.1)
Ethnicity	Hispanic	51.2% (50.2-52.2)	21.2% (20.4-22.1)	7.6% (7.1-8.1)
		58.8% (58.6-59.0)	30.2% (30.0-30.4)	13.5% (13.3-13.7)
Age Group	Under 18	37.9% (37.5-38.3)	5.1% (4.9-5.3)	1.7% (1.5-1.8)
	18-24	56.2% (55.4-57.0)	45.9% (45.1-46.6)	13.7% (13.1-14.2)
	25-34	59.0% (58.4-59.6)	52.0% (51.4-52.6)	19.3% (18.9-19.8)
	35-44	70.7% (70.1-71.3)	43.7% (43.1-44.4)	21.4% (20.8-21.9)
	45-54	79.7% (79.1-80.3)	38.6% (38.0-39.3)	23.4% (22.9-24.0)
	55-64	84.9% (84.1-85.5)	28.9% (28.1-30.0)	19.3% (18.6-20.1)
Total	65+	89.7% (88.6-90.7)	11.2% (10.2-12.3)	7.8% (6.9-8.7)
		58.5% (58.2-58.7)	29.6% (29.4-29.9)	13.2% (13.1-13.4)

Source: Indiana Division of Mental Health and Addiction, 2015

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 (58.5%) than Substance Use Disorder (SUD) (29.6%), which, in turn, was significantly higher than the percentage of those with Co-Occurring Disorder (COD) (13.2%). 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 (48.9%) but a higher percentage of SUD (34.4%) compared to females (SMI: 68.1%, SUD: 24.9%); 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.

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

The percentage of those with SMI significantly increased with age, from 37.9% for those under 18 to 89.7% for those 65 and older. SUD was lowest for those under 18 (5.1%) and highest for those 25-34 (52.0%) years of age, but then decreased significantly with age. COD was lowest for those under 18 (1.7%) and gradually increased with each age group, peaking at age 45-54 at 23.4%, and subsequently declining with increasing age group (see Table 11.3) (Indiana Division of Mental Health and Addiction, 2015). The patterns identified within the treatment population in 2014 are very similar to the patterns in the previous year.

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).¹

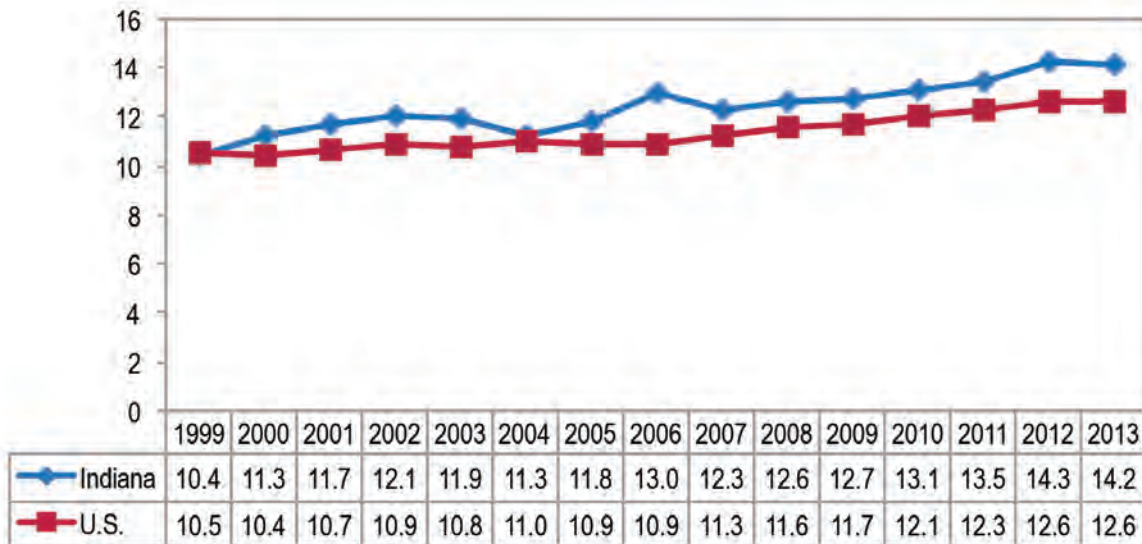
¹A closer look at suicide ideation and planning, stratified by gender and race/ethnicity is beyond the scope of this report and will be discussed in an upcoming issue brief.

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 2013 (see Figure 11.8) (Centers for Disease

Control and Prevention, 2014). Within Indiana, suicide completion was significantly greater among whites and males (see Table 11.5) (Centers for Disease Control and Prevention, 2014).

Figure 11.8 Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 1999-2013)



Source: Centers for Disease Control and Prevention, 2014

Table 11.5 Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 2014)

		Indiana (95% CI)	U.S. (95% CI)
Gender	Male	23.5% (21.8 - 25.2)	20.3% (20.0-20.5)
	Female	5.7% (4.8 - 6.5)	5.5% (5.3-5.6)
Race/Ethnicity	White	15.2% (14.2-16.2)	14.2% (14.1-14.4)
	Black	6.9% (5.0 - 9.3)	5.4% (31.3-32.5)
	Hispanic	5.7% (3.5 - 9.0)	5.7% (5.4 - 5.9)
Total		14.2 (13.3 - 15.2)	12.6% (12.5-12.7)

Source: Centers for Disease Control and Prevention, 2014

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, 2014). [See Figures 11.1 and 11.2.]

Serious Mental Illness (SMI): “SAMHSA defined SMI as persons aged 18 or older who currently or at any time in the past year have had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet the criteria specified within DSM-IV that has resulted in serious functional impairment, which substantially interferes with or limits one or more major life activities” (Substance Abuse and Mental Health Services Administration, 2014). [See Figures 11.1 and 11.2.]

Major Depressive Episode (MDE): “MDE, as defined in NSDUH, is based on the definition of MDE in the DSM-IV (APA, 1994) and is measured for the lifetime and past year periods. Lifetime MDE is defined as having at least five or more of nine symptoms of depression in the same 2-week period in a person’s lifetime, in which at least one of the symptoms was a depressed mood or loss of interest or pleasure in daily activities. Respondents who had MDE in their lifetime were defined as having past year MDE if they had a period of depression lasting 2 weeks or longer in the past 12 months while also having some of the other symptoms of MDE. It should be noted that, unlike the DSM-IV criteria for MDE, no exclusions were made in NSDUH for depressive symptoms caused by medical illness, bereavement, or substance use disorders” (Substance Abuse and Mental Health Services Administration, 2014). [See Figures 11.3 and 11.4.]

Depression: “Has a doctor, nurse, or other health professional EVER told you that you had...a depressive disorder, including depression, major depression, dysthymia, or minor depression?” (Centers for Disease Control and Prevention, 2013). [See Table 11.1.]

Feeling Sad or Hopeless:

- a) “Felt sad or hopeless (almost every day for 2 or more weeks in a row so that they stopped doing some usual activities during the 12 months before the survey)” (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., 2014). [See Figure 11.5.]

Indiana and U.S. State Mental Health Agency Revenue

Per Capita: “State mental health agency revenue includes all state general revenues that flow through the agency to local providers. This includes state general fund and other expenditures that go to local mental health providers, Medicaid funds controlled by the agency that go to local entities, and federal funds that go directly to the agency (e.g. the Mental Health Block Grant). Revenue estimates were adjusted to 2012 dollars using the GDP Price Index. The index is compiled by the U.S. Department of Commerce’s Bureau of Economic Analysis” (Substance Abuse and Mental Health Services Administration, 2014).

To compute per capita revenue, we divided these values by the number of Indiana and U.S. populations, based on population estimates as of July 1, 2010 retrieved from the U.S. Census Bureau.

Mental Health Treatment: “Mental health treatment is using prescription medication or receiving outpatient or inpatient care for problems with emotions, nerves, or mental health. Respondents were asked not to include treatment for alcohol or drug use. Respondents with unknown treatment information were excluded” (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. and Table 11.5.]

REFERENCES, CHAPTER 11

- Bradizza, C. M., Stasiewicz, P. R., & Paas, N. D. (2006). Relapse to alcohol and drug use among individuals diagnosed with co-occurring mental health and substance use disorders: A review. *Clinical Psychology Review*, 26(2), 162–178. doi:10.1016/j.cpr.2005.11.005.
- Centers for Disease Control and Prevention. (1999-2011). *High School Youth Risk Behavior Survey Data*. Retrieved from <http://nccd.cdc.gov/youthonline>
- Centers for Disease Control and Prevention. (2011). *U.S. Adult Mental Illness Surveillance Report*. Retrieved from <http://www.cdc.gov/MentalHealthSurveillance/>
- Centers for Disease Control and Prevention. (2013). *Behavioral Risk Factor Surveillance System Survey Data*. Retrieved from <http://apps.nccd.cdc.gov/brfss/>
- Centers for Disease Control and Prevention. (2014). *CDC WONDER underlying cause of death (detailed mortality)*. Retrieved from <http://wonder.cdc.gov/>
- Centers for Disease Control and Prevention. (2013b). *Suicide Prevention*. Retrieved from <http://www.cdc.gov/ViolencePrevention/suicide/index.html>
- Centers for Disease Control and Prevention. (2014). *Bullying Research*. Retrieved from <http://www.cdc.gov/violenceprevention/youthviolence/bullyingresearch/index.html>
- Davidson, L., & White, W. (2007). The Concept of Recovery as an Organizing Principle for Integrating Mental Health and Addiction Services. *The Journal of Behavioral Health Services and Research*, 34(2), 109–120. doi:10.1007/s11414-007-9053-7.
- Gassman, R., Jun, M., Samuel, S., Agle, J. D., Lee, J., Boyken, M. K., Boyken, J. R., Halbleib, J. D., Jordan, C. L., Montgomery, J. C., Palmer, A. V., Pardue, S. E., Rudbart, F. J., Smith, J. N., Smith, J. A., & Oi, S. E. (2014). *Indiana Youth Survey*. Bloomington, IN: Indiana Prevention Resource Center.
- Indiana Division of Mental Health and Addiction. (2015). *Data Assessment Registry Mental Health and Addiction (DARMHA), 2014*. De-identified data received on January 23, 2015, from the Indiana Division of Mental Health and Addiction.
- Kessler, R. C. (2004). The epidemiology of dual diagnosis. *Biological Psychiatry*, 56(10), 730–737. doi:10.1016/j.biopsych.2004.06.034.
- Substance Abuse and Mental Health Services Administration. (2002). *Report to Congress on the prevention and treatment of co-occurring substance abuse disorders and mental disorders*. Washington DC: United States Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration. (2013a). *Behavioral Health, United States, 2012*. HHS Publication No. (SMA) 13-4797. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Substance Abuse and Mental Health Services Administration. (2014). *National Survey on Drug Use and Health (NSDUH)*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh/reports>

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 rate¹ at which an indicator occurred) and their overall *contribution* to the problem (measured by the frequency with which an indicator occurred).

For each indicator, counties were given three points if they were in the top 10 percent (90th percentile), two points if they were in the top 11 to 25 percent (75th percentile), one point if they were in the top 26 to 50 percent (50th percentile), and zero points if they fell below the 50th percentile. The points were then added up, averaged over the number of indicators, and multiplied by 100; this created a priority score for each drug category. Higher scores equated to larger burdens of substance abuse. For each substance, the top 10 percent of counties, i.e., those most severely affected, were determined.

We then calculated an *overall substance abuse priority score* to assess severity of consumption and consequences of alcohol and other drugs within each county. This score was computed by averaging the priority scores from each drug category. The top 10 percent of counties, i.e., those with the highest overall scores and most severe problems, are listed in Table 12.6.

The selection of substance abuse indicators was limited to datasets with de-identified county-level information, such as the

- 2014 Treatment Episode Data Set (TEDS) (Indiana Family and Social Services Administration, 2015),²
- 2012 Uniform Crime Reporting (UCR) Program (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012),³
- 2013 Indiana Automated Reporting Information Exchange System (ARIES) (Indiana State Police, 2014),
- 2014 Methamphetamine Lab Statistics (Indiana State Police, 2015), and
- 2014 INSPECT data (Indiana Board of Pharmacy, 2015).

¹The 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.

²Indiana TEDS data are limited to individuals entering substance abuse treatment who are 200% below the federal poverty level and receive state-funded treatment; therefore, data are not representative of the entire substance abuse treatment population.

³States are not required to submit crime information to the FBI and level of reporting varies by county. The FBI uses statistical algorithms to estimate arrests for counties in which reporting is less than 100%. In Indiana, an average of about 60% of counties report the number of arrests, so the rest is estimated (see Table 2.1, page 26, for level of coverage by county).

INDICATORS OF ABUSE

Alcohol Indicators

Counties were assessed and ranked according to the following 10 indicators for alcohol abuse:

- number and rate of alcohol-related crashes
- number and rate of arrests for driving under the influence (DUI)
- number and rate of arrests for public intoxication
- number and rate of arrests for liquor law violations
- number and rate of substance abuse treatment episodes with reported alcohol use

The counties that scored in the top 10 percent based on these 10 alcohol indicators are shown in Table 12.1. For a complete listing of counties by all alcohol abuse indicators, see Appendix 12A, pages 205-207.

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

Top 10 Percent	Alcohol Priority Score
Lake	230
Monroe	230
LaPorte	210
Tippecanoe	210
Porter	200
Vanderburgh	200
Allen	190
Vigo	190
Cass	180
Marion	180
Cass	180
Bartholomew	180

Note: Alcohol priority scores ranged from 0 to 230, with higher scores indicating a more severe problem. Source: Indiana Family and Social Services Administration, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012; Indiana State Police, 2014

Marijuana Indicators

Following the methodology of the highest-need/highest-contributor model, we computed priority scores for marijuana abuse for each county. We examined communities based on the following six indicators for marijuana abuse:

- number and rate of arrests for possession of marijuana
- number and rate of arrests for sale/manufacture of marijuana
- number and rate of substance abuse treatment episodes with reported marijuana use

Table 12.2 lists the counties that ranked in the top 10 percent for marijuana abuse. For a complete listing of counties by all marijuana indicators, see Appendix 12B, pages 208-209.

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

Top 10 Percent	Marijuana Priority Score
Vanderburgh	250
Rush	233
Lake	233
Monroe	233
Tippecanoe	217
LaPorte	200
Morgan	183
Howard	183
Knox	167
Madison	167
Marion	167
Saint Joseph	167
Allen	167
Hamilton	167

Note: Marijuana priority scores ranged from 0 to 250, with higher scores indicating a more severe problem. Source: Indiana Family and Social Services Administration, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Cocaine and Heroin Indicators

Since the UCR data do not provide cocaine- or heroin-specific information, we utilized aggregated arrests for cocaine and opiates. In order to stay consistent with our methodology, we included both treatment admissions with reported use of cocaine and heroin. Our analysis is based on the following eight indicators:

- number and rate of arrests for possession of cocaine and opiates
- number and rate of arrests for sale/manufacture of cocaine and opiates
- number and rate of substance abuse treatment episodes with reported cocaine use
- number and rate of substance abuse treatment episodes with reported heroin use

Table 12.3 displays the counties with priority scores in the top 10 percent. For a complete listing of counties by cocaine and heroin abuse indicators, see Appendix 12C, pages 210-211.

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

Top 10 Percent	Cocaine-Heroin Priority Score
Howard	288
Wayne	250
LaPorte	250
Marion	238
Lake	238
Clark	225
Monroe	200
Montgomery	200
Saint Joseph	200

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, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

Methamphetamine (Meth) Indicators

We computed meth priority scores based on eight indicators:

- number and rate of arrests for possession of synthetic drugs
- number and rate of arrests for sale/manufacture of synthetic drugs
- number and rate of substance abuse treatment episodes with reported meth use
- number and rate of clandestine meth lab seizures

The UCR program does not collect meth-specific information, but includes arrests for possession and sale/manufacture of synthetic drugs, encompassing methamphetamine. For the top 10 percent of counties with the highest meth priority scores, see Table 12.4. A complete listing of all counties by methamphetamine indicators can be found in Appendix 12D, pages 212-213.

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

Top 10 Percent	Meth Priority Score
Starke	255
Vigo	255
Vanderburgh	213
Warrick	200
Noble	188
DeKalb	188
Knox	188
Miami	175
Jay	175
Kosciusko	175
Orange	175
Marshall	175
Gibson	175
Bartholomew	175

Note: Methamphetamine priority scores ranged from 0 to 255, with higher scores indicating a more severe problem.

Source: Indiana Family and Social Services Administration, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012; Indiana State Police, 2015

Prescription Drug (Rx) Indicators

Prescription drug abuse refers to the nonmedical use of any prescription-type pharmaceutical, which includes opioids (pain relievers), depressants of the central nervous system (sedatives, hypnotics, and tranquilizers), and stimulants. We selected the following prescription drug indicators for our analysis:

- number and rate of arrests for possession of “other drugs” (barbiturates and Benzedrine)⁴
- number and rate of arrests for sale/manufacture of “other drugs” (barbiturates and Benzedrine)
- number and rate of treatment episodes with nonmedical prescription drug use reported
- number and rate of 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 214-215.

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

Top 10 Percent	Rx Priority Score
Madison	263
Vanderburgh	250
Howard	225
Monroe	213
Morgan	200
Floyd	200
Henry	188
Lake	188
Knox	175
Jackson	175

Note: Prescription drug priority scores ranged from 0 to 263, with higher scores indicating a more severe problem.

Source: Indiana Family and Social Services Administration, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012

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 216.

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

Top 10 Percent	Total Priority Score
Vanderburgh	208
Monroe	203
Lake	188
Howard	181
Marion	169
Madison	166
Clark	162
Tippecanoe	160
LaPorte	152

Note: Overall substance abuse priority scores ranged from 14 to 208, with higher scores indicating a more severe problem.

Source: Indiana Family and Social Services Administration, 2015; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012; Indiana State Police, 2014, 2015; Indiana Board of Pharmacy, 2015

⁴Barbiturates (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, 2012; Treatment Episode Data Set, 2014; and Automated Reporting Information Exchange System, 2013)

County	DUI Arrests		Public Intoxication Arrests		Liquor Law Violation Arrests		Alcohol Use Reported at Treatment Admission		Alcohol-Related Collisions		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Adams	147	4.26	32	0.93	67	1.94	121	3.50	28	0.81	60	
Allen	1,500	4.17	679	1.89	264	0.73	1,275	3.51	511	1.41	190	Top 10
Bartholomew	375	4.82	203	2.61	217	2.79	337	4.23	61	0.70	160	Top 25
Benton	17	*1.91	5	*0.56	10	*1.13	34	3.88	6	*0.68	10	
Blackford	38	3.04	13	*1.04	12	*0.96	26	2.08	9	*0.72	0	
Boone	89	1.54	54	0.94	110	1.91	107	1.77	59	0.98	40	
Brown	31	2.05	3	*0.20	30	1.98	43	2.86	27	1.80	40	
Carroll	97	4.83	20	1.00	48	2.39	58	2.89	19	*0.95	30	
Cass	152	3.90	160	4.11	145	3.72	222	5.77	47	1.22	180	Top 10
Clark	919	8.21	318	2.84	171	1.53	161	1.43	155	1.37	170	Top 25
Clay	96	3.56	46	1.71	31	1.15	112	4.18	42	1.57	60	
Clinton	127	3.82	39	1.17	68	2.05	107	3.25	57	1.73	80	Top 50
Crawford	61	5.71	22	2.06	15	1.40	40	3.77	11	*1.04	40	
Daviess	145	4.52	54	1.68	58	1.81	84	2.59	39	1.20	70	Top 50
Dearborn	116	2.31	57	1.13	37	0.74	313	6.27	104	2.08	120	Top 25
Decatur	75	2.88	52	2.00	66	2.54	112	4.26	35	1.33	50	
DeKalb	149	3.50	47	1.10	100	2.35	143	3.38	47	1.11	60	
Delaware	405	3.43	248	2.10	205	1.74	504	4.29	159	1.35	150	Top 25
Dubois	112	2.65	42	0.99	92	2.17	209	4.93	60	1.42	90	Top 50
Elkhart	676	3.38	153	0.76	272	1.36	415	2.07	226	1.13	130	Top 25
Fayette	96	3.94	49	2.01	78	3.20	106	4.44	30	1.26	90	Top 50
Floyd	373	4.96	251	3.34	127	1.69	56	0.73	109	1.43	140	Top 25
Fountain	68	3.94	20	1.16	34	1.97	26	1.54	23	1.36	30	
Franklin	5	*0.23	0	*0.00	55	2.56	119	5.18	37	1.61	60	
Fulton	69	3.30	27	1.29	38	1.81	158	7.73	19	*0.93	70	Top 50
Gibson	182	5.42	0	*0.00	135	4.02	154	4.58	44	1.31	120	Top 25
Grant	177	2.53	85	1.21	90	1.29	316	4.57	63	0.91	80	Top 50
Greene	103	3.12	81	2.45	40	1.21	112	3.42	32	0.98	30	
Hamilton	948	3.34	150	0.53	841	2.96	652	2.20	274	0.92	170	Top 25
Hancock	238	3.24	106	1.44	166	2.26	119	1.66	79	1.10	90	Top 50
Harrison	42	1.06	10	*0.25	34	0.86	11	*0.28	41	1.05	0	
Hendricks	508	3.42	152	1.02	249	1.68	165	1.07	140	0.91	100	Top 50
Henry	85	1.72	46	0.93	200	4.05	149	3.04	45	0.92	70	Top 50
Howard	211	2.54	169	2.03	110	1.32	327	3.95	118	1.43	120	Top 25
Huntington	165	4.42	20	0.54	90	2.41	59	1.60	44	1.20	70	Top 50
Jackson	146	3.39	79	1.83	112	2.60	134	3.08	62	1.43	110	Top 50
Jasper	93	2.77	33	0.98	55	1.64	45	1.35	55	1.65	30	
Jay	73	3.39	88	4.09	54	2.51	56	2.63	27	1.27	70	Top 50
Jefferson	116	3.59	53	1.64	84	2.60	167	5.15	44	1.36	120	Top 25
Jennings	77	2.72	35	1.24	49	1.73	130	4.60	32	1.13	30	

(continued on next page)

APPENDIX 12A (Continued from previous page)

County	DUI Arrests		Public Intoxication Arrests		Liquor Law Violation Arrests		Alcohol Use Reported at Treatment Admission		Alcohol-Related Collisions		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Johnson	475	3.33	95	0.67	403	2.83	127	0.87	128	0.88	120	Top 25
Knox	117	3.03	49	1.27	379	9.81	184	4.85	52	1.37	130	Top 25
Kosciusko	591	7.67	100	1.30	147	1.91	189	2.42	99	1.27	150	Top 25
LaGrange	92	2.45	9	*0.24	98	2.61	127	3.34	35	0.92	40	
Lake	2,395	4.82	1,678	3.38	1,144	2.30	1,696	3.45	795	1.62	230	Top 10
LaPorte	645	5.77	308	2.76	368	3.29	304	2.73	189	1.70	210	Top 10
Lawrence	117	2.52	53	1.14	113	2.44	177	3.86	58	1.27	80	Top 50
Madison	349	2.65	282	2.14	159	1.21	553	4.24	142	1.09	150	Top 25
Marion	2,394	2.63	4,463	4.90	988	1.08	2,055	2.21	1,093	1.18	180	Top 10
Marshall	307	6.50	114	2.42	169	3.58	144	3.06	52	1.10	160	Top 25
Martin	27	2.61	21	2.03	20	1.93	23	2.26	12	*1.18	20	
Miami	77	2.10	58	1.58	19	*0.52	189	5.23	43	1.19	80	Top 50
Monroe	417	2.97	635	4.53	666	4.75	800	5.64	173	1.22	230	Top 10
Montgomery	144	3.73	100	2.59	89	2.31	134	3.51	41	1.07	100	Top 50
Morgan	175	2.51	70	1.00	191	2.74	184	2.64	67	0.96	80	Top 50
Newton	83	5.84	40	2.82	6	*0.42	19	*1.35	23	1.63	70	Top 50
Noble	177	3.71	68	1.43	140	2.93	141	2.96	51	1.07	90	Top 50
Ohio	15	2.47	4	*0.66	8	*1.31	27	4.50	5	*0.83	20	
Orange	117	5.84	43	2.15	14	*0.70	69	3.49	29	1.47	90	Top 50
Owen	55	2.55	15	*0.70	30	1.39	110	5.19	38	1.79	50	
Parke	106	6.13	27	1.56	27	1.56	57	3.31	32	1.86	70	Top 50
Perry	86	4.43	62	3.19	66	3.40	93	4.76	30	1.53	120	Top 25
Pike	41	3.21	16	*1.25	26	2.04	24	1.89	13	*1.02	10	
Porter	1,028	6.19	217	1.31	544	3.28	342	2.05	212	1.27	200	Top 10
Posey	67	2.60	31	1.20	37	1.43	107	4.20	32	1.26	20	
Pulaski	59	4.40	29	2.16	8	*0.60	83	6.38	12	*0.92	70	Top 50
Putnam	247	6.49	50	1.31	61	1.60	110	2.93	22	0.59	70	Top 50
Randolph	29	1.11	14	0.53	56	2.14	110	4.29	26	1.01	20	
Ripley	78	2.56	22	0.72	41	1.34	166	5.84	42	1.48	70	Top 50
Rush	64	3.69	1	*0.06	92	5.31	92	5.41	17	*1.00	80	Top 50
Saint Joseph	653	2.44	94	0.35	311	1.16	929	3.48	300	1.12	130	Top 25
Scott	61	2.54	75	3.12	70	2.91	31	1.29	24	1.00	60	
Shelby	82	1.85	27	0.61	34	0.77	61	1.36	56	1.25	20	
Spencer	60	2.85	19	*0.90	30	1.43	122	5.83	29	1.38	50	
Starke	49	2.11	28	1.20	33	1.42	107	4.61	23	0.99	20	
Steuben	148	4.34	26	0.76	105	3.08	152	4.42	59	1.72	120	Top 25
Sullivan	35	1.63	22	1.03	28	1.31	44	2.07	20	0.94	0	
Switzerland	30	2.83	10	0.94	15	*1.41	41	3.90	11	1.05	10	
Tippecanoe	593	3.38	616	3.51	372	2.12	277	1.54	307	1.70	210	Top 10
Tipton	33	2.08	37	2.34	11	*0.69	28	1.79	12	*0.77	20	
Union	19	2.52	5	*0.66	10	*1.33	17	*2.34	8	*1.10	0	
Vanderburgh	626	3.46	731	4.04	230	1.27	845	4.66	217	1.20	200	Top 10

(continued on next page)

APPENDIX 12A (Continued from previous page)

County	DUI Arrests		Public Intoxication Arrests		Liquor Law Violation Arrests		Alcohol Use Reported at Treatment Admission		Alcohol-Related Collisions		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Vermillion	37	2.27	49	3.01	10	*0.61	64	4.03	23	1.45	60	
Vigo	353	3.25	204	1.88	423	3.90	410	3.79	166	1.53	190	Top 10
Wabash	108	3.30	55	1.68	83	2.54	152	4.70	31	0.96	80	Top 50
Warren	24	2.84	8	*0.95	12	*1.42	11	*1.31	14	*1.66	30	
Warrick	141	2.33	51	0.84	70	1.16	213	3.49	57	0.93	70	Top 50
Washington	204	7.23	46	1.63	49	1.74	32	1.15	40	1.44	70	Top 50
Wayne	171	2.48	239	3.47	65	0.94	242	3.56	88	1.30	120	Top 25
Wells	46	1.65	9	*0.32	45	1.62	93	3.34	23	0.83	0	
White	99	4.00	32	1.29	32	1.29	95	3.88	31	1.27	40	
Whitley	102	3.05	29	0.87	60	1.79	81	2.43	37	1.11	0	
Indiana	23,350	3.57	14,787	2.26	12,866	1.97	19,967	3.04	8,159	1.24		

* Rates that are based on numbers lower than 20 are unreliable.

Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five are not specified, but marked <5.

The alcohol priority score was based on 10 indicators and ranged from 0 to 230. Higher priority scores indicate a more severe problem.

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2012; Indiana Family and Social Services Administration, 2015; Indiana State Police, 2014

APPENDIX 12B

Marijuana Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2014)

County	Marijuana Possession Arrests		Marijuana Sale Arrests		Marijuana Use Reported At Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate		
Adams	40	1.16	5	*0.15	98	2.83	17	
Allen	578	1.60	31	0.09	1,116	3.07	167	Top 10
Bartholomew	152	1.92	16	*0.20	348	4.37	150	Top 25
Benton	7	*0.79	1	*0.11	36	4.11	33	
Blackford	21	1.67	1	*0.08	23	1.84	17	
Boone	49	0.83	9	*0.15	84	1.39	33	
Brown	12	*0.80	0	*0.00	41	2.73	0	
Carroll	35	1.74	2	*0.10	51	2.54	17	
Cass	59	1.52	9	*0.23	156	4.06	117	Top 50
Clark	276	2.46	40	0.36	89	0.79	150	Top 25
Clay	33	1.23	4	*0.15	92	3.43	17	
Clinton	35	1.06	3	*0.09	92	2.79	0	
Crawford	16	*1.50	5	*0.47	26	2.45	50	
Daviess	65	2.02	3	*0.09	66	2.04	50	
Dearborn	44	0.88	7	*0.14	260	5.21	100	Top 50
Decatur	33	1.26	6	*0.23	89	3.39	50	
DeKalb	50	1.18	17	*0.40	134	3.17	100	Top 50
Delaware	157	1.34	2	*0.02	448	3.81	100	Top 50
Dubois	43	1.02	3	*0.07	137	3.23	33	
Elkhart	299	1.50	10	*0.05	376	1.87	100	Top 50
Fayette	49	2.04	8	*0.33	92	3.86	133	Top 25
Floyd	184	2.44	21	0.28	41	0.54	117	Top 50
Fountain	25	1.46	7	*0.41	34	2.01	67	
Franklin	1	*0.04	13	*0.57	91	3.96	100	Top 50
Fulton	41	1.98	4	*0.19	124	6.06	100	Top 50
Gibson	46	1.37	2	*0.06	113	3.36	50	
Grant	146	2.11	6	*0.09	304	4.40	167	Top 10
Greene	42	1.27	3	*0.09	88	2.68	0	
Hamilton	684	2.36	22	0.08	488	1.64	183	Top 10
Hancock	124	1.75	17	*0.24	112	1.56	83	Top 50
Harrison	13	*0.33	3	*0.08	8	*0.20	0	
Hendricks	334	2.21	26	0.17	139	0.90	133	Top 25
Henry	11	*0.22	52	1.06	143	2.92	133	Top 25
Howard	183	2.21	20	0.24	331	4.00	183	Top 10
Huntington	40	1.08	1	*0.03	48	1.30	0	
Jackson	131	3.04	11	*0.26	160	3.68	150	Top 25
Jasper	30	0.90	22	0.66	40	1.20	83	Top 50
Jay	66	3.09	4	*0.19	51	2.39	83	Top 50
Jefferson	56	1.72	9	*0.28	146	4.50	133	Top 25
Jennings	1	*0.04	24	0.85	124	4.39	133	Top 25
Johnson	325	2.27	16	*0.11	110	0.76	100	Top 50
Knox	56	1.47	51	1.34	115	3.03	167	Top 10
Kosciusko	148	1.91	39	0.50	138	1.77	133	Top 25
LaGrange	46	1.22	3	*0.08	95	2.50	17	
Lake	1,134	2.30	436	0.88	1,098	2.23	233	Top 10
LaPorte	250	2.25	89	0.80	213	1.91	200	Top 10
Lawrence	63	1.37	4	*0.09	161	3.51	67	
Madison	148	1.14	28	0.21	542	4.15	167	Top 10
Marion	1,009	1.10	189	0.21	2,010	2.17	167	Top 10
Marshall	136	2.89	1	*0.02	127	2.70	100	Top 50
Martin	14	*1.36	6	*0.58	22	2.17	50	
Miami	13	*0.36	6	*0.16	178	4.93	100	Top 50
Monroe	342	2.42	27	0.19	669	4.71	250	Top 10
Montgomery	94	2.46	10	*0.26	159	4.16	133	Top 25

(continued on next page)

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	122	1.76	69	0.99	225	3.22	183	Top 10
Newton	29	2.06	2	*0.14	14	*0.99	33	
Noble	88	1.85	10	*0.21	122	2.56	83	Top 50
Ohio	6	*0.99	1	*0.16	23	3.84	17	
Orange	33	1.67	10	*0.51	63	3.19	83	Top 50
Owen	22	1.03	3	*0.14	85	4.01	33	
Parke	49	2.86	3	*0.18	43	2.50	83	Top 50
Perry	38	1.95	9	*0.46	70	3.58	83	Top 50
Pike	18	1.41	3	*0.23	15	*1.18	17	
Porter	394	2.38	22	0.13	299	1.80	150	Top 25
Posey	31	1.21	2	*0.08	59	2.31	0	
Pulaski	8	*0.61	2	*0.15	58	4.46	50	
Putnam	48	1.28	13	*0.35	89	2.37	67	
Randolph	33	1.28	2	*0.08	104	4.06	50	
Ripley	28	0.98	3	*0.11	122	4.29	50	
Rush	71	4.15	66	3.85	102	6.00	233	Top 10
Saint Joseph	464	1.74	29	0.11	786	2.95	167	Top 10
Scott	26	1.09	4	*0.17	24	1.00	0	
Shelby	19	*0.43	3	*0.07	69	1.54	0	
Spencer	24	1.15	3	*0.14	96	4.58	50	
Starke	38	1.64	13	*0.56	102	4.40	133	Top 25
Steuben	64	1.87	5	*0.15	115	3.35	67	
Sullivan	16	*0.75	4	*0.19	39	1.84	17	
Switzerland	12	*1.15	2	*0.19	29	2.76	17	
Tippecanoe	481	2.71	55	0.31	230	1.28	217	Top 10
Tipton	21	1.33	1	*0.06	36	2.30	0	
Union	8	*1.09	1	*0.14	20	2.75	0	
Vanderburgh	632	3.50	67	0.37	641	3.53	250	Top 10
Vermillion	11	*0.69	3	*0.19	49	3.09	33	
Vigo	164	1.51	16	*0.15	402	3.71	117	Top 50
Wabash	47	1.45	11	*0.34	100	3.09	117	Top 50
Warren	10	*1.19	1	*0.12	8	*0.95	0	
Warrick	111	1.84	18	*0.30	155	2.54	100	Top 50
Washington	29	1.04	3	*0.11	9	*0.32	0	
Wayne	96	1.41	18	*0.26	192	2.83	117	Top 50
Wells	14	*0.51	0	*0.00	77	2.77	0	
White	52	2.13	4	*0.16	95	3.88	83	Top 50
Whitley	39	1.17	4	*0.12	73	2.19	0	
Indiana	11,385	1.74	1,839	0.28	16,916	2.57		

* 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 marijuana priority score was based on six 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, 2012; Indiana Family and Social Services Administration, 2015

APPENDIX 12C

Cocaine and Heroin Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population
(Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2014)

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	14	*0.41	6	*0.17	11	*0.32	8	*0.23	50	
Allen	0	*0.00	0	*0.00	106	0.29	33	0.09	50	
Bartholomew	110	1.42	8	*0.10	271	3.41	12	*0.15	175	Top 10
Benton	2	*0.23	1	*0.11	<5	*0.34	2	*0.23	0	
Blackford	19	*1.52	12	*0.96	<5	*0.32	13	*1.04	163	Top 25
Boone	7	*0.12	3	*0.05	14	*0.23	2	*0.03	0	
Brown	6	*0.40	7	*0.46	21	1.40	3	*0.20	63	
Carroll	2	*0.10	0	*0.00	17	*0.85	2	*0.10	0	
Cass	4	*0.10	0	*0.00	52	1.35	22	0.57	75	Top 50
Clark	201	1.80	33	0.29	27	0.24	26	0.23	163	Top 25
Clay	13	*0.48	8	*0.30	66	2.46	10	*0.37	125	Top 50
Clinton	1	*0.03	2	*0.06	16	*0.49	11	*0.33	25	
Crawford	6	*0.56	2	*0.19	21	1.98	3	*0.28	75	Top 50
Daviess	29	0.90	16	*0.50	50	1.54	7	*0.22	125	Top 50
Dearborn	1	*0.02	3	*0.06	17	*0.34	2	*0.04	0	
Decatur	13	*0.50	6	*0.23	37	1.41	41	1.56	150	Top 25
DeKalb	15	*0.35	22	0.52	64	1.51	49	1.16	188	Top 10
Delaware	63	0.53	0	*0.00	124	1.06	148	1.26	163	Top 25
Dubois	31	0.73	9	*0.21	50	1.18	2	*0.05	100	Top 50
Elkhart	17	*0.08	8	*0.04	98	0.49	53	0.26	100	Top 50
Fayette	10	*0.41	5	*0.21	13	*0.54	5	*0.21	25	
Floyd	23	0.31	2	*0.03	22	0.29	20	0.26	50	
Fountain	10	*0.58	5	*0.29	5	*0.30	7	*0.41	63	
Franklin	0	*0.00	0	*0.00	12	*0.52	5	*0.22	0	
Fulton	10	*0.48	4	*0.19	68	3.33	27	1.32	138	Top 25
Gibson	34	1.01	19	*0.57	68	2.02	10	*0.30	175	Top 10
Grant	23	0.33	5	*0.07	25	0.36	26	0.38	63	
Greene	12	*0.36	17	*0.52	52	1.59	12	*0.37	125	Top 50
Hamilton	88	0.31	10	*0.04	15	*0.05	0	*0.00	50	
Hancock	22	0.30	9	*0.12	7	*0.10	3	*0.04	25	
Harrison	7	*0.18	4	*0.10	5	*0.13	28	0.71	50	
Hendricks	56	0.38	16	*0.11	31	0.20	1	*0.01	75	Top 50
Henry	0	*0.00	0	*0.00	19	*0.39	9	*0.18	13	
Howard	1	*0.01	6	*0.07	96	1.16	29	0.35	88	Top 50
Huntington	0	*0.00	0	*0.00	9	*0.24	17	*0.46	25	
Jackson	17	*0.39	6	*0.14	144	3.31	9	*0.21	138	Top 25
Jasper	7	*0.21	10	*0.30	17	*0.51	9	*0.27	63	
Jay	24	1.12	20	*0.93	17	*0.80	21	0.98	175	Top 10
Jefferson	13	*0.40	7	*0.22	82	2.53	4	*0.12	113	Top 50
Jennings	0	*0.00	0	*0.00	110	3.90	12	*0.42	88	Top 50
Johnson	8	*0.06	2	*0.01	39	0.27	18	*0.12	25	
Knox	28	0.72	9	*0.23	107	2.82	23	0.61	188	Top 10
Kosciusko	34	0.44	23	0.30	40	0.51	58	0.74	175	Top 10
LaGrange	7	*0.19	2	*0.05	58	1.53	9	*0.24	38	
Lake	42	0.08	13	*0.03	29	0.06	1	*0.00	50	
LaPorte	19	*0.17	3	*0.03	15	*0.13	5	*0.04	13	
Lawrence	20	0.43	10	*0.22	109	2.38	13	*0.28	125	Top 50
Madison	10	*0.08	15	*0.11	80	0.61	33	0.25	75	Top 50

(continued on next page)

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		
Marion	176	0.19	49	0.05	185	0.20	9	*0.01	125	Top 50
Marshall	64	1.36	8	*0.17	43	0.91	27	0.57	175	Top 10
Martin	16	*1.54	2	*0.19	23	2.26	10	*0.98	138	Top 25
Miami	4	*0.11	16	*0.44	69	1.91	40	1.11	175	Top 10
Monroe	16	*0.11	17	*0.12	204	1.44	43	0.30	138	Top 25
Montgomery	9	*0.23	6	*0.16	60	1.57	23	0.60	100	Top 50
Morgan	12	*0.17	6	*0.09	154	2.21	4	*0.06	88	Top 50
Newton	2	*0.14	0	*0.00	7	*0.50	0	*0.00	0	
Noble	31	0.65	11	*0.23	80	1.68	57	1.20	188	Top 10
Ohio	1	*0.16	1	*0.16	<5	*0.17	0	*0.00	13	
Orange	39	1.95	14	*0.70	27	1.37	13	*0.66	175	Top 10
Owen	5	*0.23	2	*0.09	43	2.03	9	*0.42	63	
Parke	23	1.33	19	*1.10	16	*0.93	7	*0.41	150	Top 25
Perry	18	*0.93	6	*0.31	42	2.15	6	*0.31	125	Top 50
Pike	5	*0.39	3	*0.23	10	*0.79	2	*0.16	25	
Porter	12	*0.07	2	*0.01	14	*0.08	2	*0.01	13	
Posey	11	*0.43	3	*0.12	37	1.45	9	*0.35	63	
Pulaski	11	*0.82	2	*0.15	18	*1.38	8	*0.62	75	Top 50
Putnam	20	0.53	16	*0.42	69	1.84	0	*0.00	125	Top 50
Randolph	5	*0.19	1	*0.04	11	*0.43	8	*0.31	13	
Ripley	11	*0.36	6	*0.20	23	0.81	8	*0.28	50	
Rush	2	*0.12	0	*0.00	24	1.41	2	*0.12	13	
Saint Joseph	70	0.26	2	*0.01	152	0.57	20	0.07	88	Top 50
Scott	28	1.16	6	*0.25	25	1.04	5	*0.21	100	Top 50
Shelby	8	*0.18	6	*0.14	27	0.60	2	*0.04	25	
Spencer	9	*0.43	5	*0.24	69	3.29	3	*0.14	88	Top 50
Starke	13	*0.56	14	*0.60	75	3.23	33	1.42	225	Top 10
Steuben	1	*0.03	6	*0.18	70	2.04	18	*0.52	113	Top 50
Sullivan	3	*0.14	1	*0.05	30	1.41	2	*0.09	13	
Switzerland	4	*0.38	3	*0.28	<5	*0.38	3	*0.29	50	
Tippecanoe	142	0.81	29	0.17	61	0.34	32	0.18	150	Top 25
Tipton	13	*0.82	14	*0.88	9	*0.58	7	*0.45	113	Top 50
Union	2	*0.27	1	*0.13	<5	*0.14	4	*0.55	25	
Vanderburgh	76	0.42	99	0.55	372	2.05	41	0.23	213	Top 10
Vermillion	0	*0.00	0	*0.00	33	2.08	4	*0.25	38	
Vigo	61	0.56	81	0.75	281	2.59	24	0.22	225	Top 10
Wabash	11	*0.34	6	*0.18	33	1.02	20	*0.62	100	Top 50
Warren	3	*0.35	2	*0.24	5	*0.59	2	*0.24	25	
Warrick	70	1.16	54	0.89	107	1.75	5	*0.08	200	Top 10
Washington	5	*0.18	3	*0.11	11	*0.40	13	*0.47	38	
Wayne	13	*0.19	3	*0.04	12	*0.18	3	*0.04	13	
Wells	0	*0.00	0	*0.00	22	0.79	5	*0.18	0	
White	6	*0.24	1	*0.04	35	1.43	13	*0.53	63	
Whitley	12	*0.36	3	*0.09	18	*0.54	14	*0.42	50	
Indiana	2,122	0.32	897	0.14	4,975	0.76	1,423	0.22		

* Rates that are based on numbers lower than 20 are unreliable.

Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five are not specified, but marked <5. The methamphetamine priority score was based on eight indicators and ranged from 0 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, 2012; Indiana Family and Social Services Administration, 2015; Indiana State Police, 2015

APPENDIX 12D

Methamphetamine (Meth) Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2014; Methamphetamine Lab Statistics, 2014)

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

(continued on next page)

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, 2012; Indiana Family and Social Services Administration, 2015; Indiana State Police, 2015

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, 2012; Treatment Episode Data Set, 2014; INSPECT Data, 2014)

County	"Other" Drug Possession Arrests		"Other" Drug Sale Arrests		Rx Drug Abuse Reported at Treatment Admission		Controlled Substances Dispensed		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate (per capita)		
Adams	8	*0.23	2	*0.06	32	0.92	45,357	1.31	0	
Allen	106	0.29	60	0.17	260	0.76	555,026	1.53	163	Top 25
Bartholomew	27	0.34	0	*0.00	230	2.66	157,971	1.98	100	Top 50
Benton	2	*0.23	1	*0.11	16	*1.69	19,702	2.25	38	
Blackford	2	*0.16	3	*0.24	29	2.13	32,327	2.59	75	Top 50
Boone	9	*0.15	4	*0.07	51	0.77	132,170	2.19	38	
Brown	0	*0.00	0	*0.00	33	1.89	36,715	2.44	38	
Carroll	8	*0.40	0	*0.00	30	1.33	28,420	1.41	13	
Cass	35	0.90	32	0.83	63	1.51	65,337	1.70	138	Top 25
Clark	20	0.18	4	*0.04	148	1.47	279,460	2.47	100	Top 50
Clay	7	*0.26	3	*0.11	25	1.41	52,722	1.97	25	
Clinton	11	*0.33	15	0.45	61	1.14	76,452	2.32	125	Top 25
Crawford	3	*0.28	0	*0.00	29	2.51	19,996	1.88	13	
Daviess	23	0.71	3	*0.09	43	1.82	64,617	1.99	63	
Dearborn	2	*0.04	9	*0.18	207	4.35	92,085	1.85	100	Top 50
Decatur	29	1.11	28	1.07	43	1.86	53,082	2.02	125	Top 25
DeKalb	13	*0.31	8	*0.19	40	0.73	72,626	1.72	50	
Delaware	1	*0.01	1	*0.01	444	3.42	259,647	2.21	113	Top 50
Dubois	8	*0.19	2	*0.05	77	2.04	84,955	2.01	38	
Elkhart	12	*0.06	1	*0.01	107	0.45	323,978	1.62	63	
Fayette	12	*0.50	4	*0.17	111	4.26	73,193	3.07	163	Top 25
Floyd	162	2.15	144	1.91	73	0.97	176,216	2.31	200	Top 10
Fountain	6	*0.35	4	*0.23	23	1.44	37,896	2.25	63	
Franklin	6	*0.26	9	*0.39	74	2.60	55,012	2.40	88	Top 50
Fulton	14	*0.68	8	*0.39	51	2.58	38,730	1.89	100	Top 50
Gibson	32	0.95	2	*0.06	54	1.40	86,689	2.58	88	Top 50
Grant	1	*0.01	2	*0.03	189	2.49	177,729	2.57	88	Top 50
Greene	4	*0.12	1	*0.03	74	2.64	80,707	2.46	75	Top 50
Hamilton	16	*0.06	7	*0.02	216	0.84	477,198	1.61	88	Top 50
Hancock	29	0.41	12	*0.17	72	0.90	154,265	2.16	100	Top 50
Harrison	3	*0.08	0	*0.00	8	*0.35	82,946	2.12	25	
Hendricks	57	0.38	15	*0.10	84	0.61	239,552	1.56	100	Top 50
Henry	36	0.73	12	*0.24	198	2.84	127,274	2.60	188	Top 10
Howard	92	1.11	10	*0.12	308	3.73	199,424	2.41	225	Top 10
Huntington	6	*0.16	0	*0.00	32	0.94	70,636	1.92	13	
Jackson	57	1.32	28	0.65	93	2.23	93,207	2.14	175	Top 10
Jasper	9	*0.27	12	*0.36	46	1.16	78,848	2.36	75	Top 50
Jay	8	*0.37	1	*0.05	29	1.35	42,115	1.97	13	
Jefferson	14	*0.43	5	*0.15	155	4.20	87,611	2.70	163	Top 25
Jennings	1	*0.04	6	*0.21	81	3.00	66,630	2.36	75	Top 50
Johnson	51	0.36	45	0.31	85	0.59	294,521	2.02	138	Top 25
Knox	37	0.97	11	*0.29	79	2.69	110,586	2.91	175	Top 10
Kosciusko	35	0.45	29	0.37	55	1.23	126,990	1.63	100	Top 50
LaGrange	3	*0.08	0	*0.00	20	0.38	35,872	0.94	0	
Lake	395	0.80	81	0.16	388	0.76	819,561	1.67	188	Top 10
LaPorte	18	*0.16	3	*0.03	138	1.45	248,639	2.23	88	Top 50
Lawrence	19	*0.41	3	*0.07	193	4.01	128,162	2.80	150	Top 25
Madison	137	1.05	55	0.42	408	2.40	335,176	2.57	263	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	31	0.03	39	0.04	1,276	1.37	1,596,222	1.72	138	Top 25
Marshall	29	0.62	10	*0.21	52	1.37	85,789	1.82	75	Top 50
Martin	3	*0.29	2	*0.19	21	2.02	31,056	3.06	63	
Miami	4	*0.11	0	*0.00	100	2.40	64,379	1.78	25	
Monroe	121	0.86	31	0.22	417	2.96	218,033	1.54	213	Top 10
Montgomery	59	1.54	3	*0.08	86	2.56	83,947	2.20	138	Top 25
Morgan	70	1.01	16	*0.23	139	2.50	179,580	2.57	200	Top 10
Newton	0	*0.00	1	*0.07	10	*0.56	21,428	1.52	0	
Noble	22	0.46	6	*0.13	33	1.44	82,207	1.73	63	
Ohio	2	*0.33	1	*0.16	14	*3.08	11,675	1.95	63	
Orange	2	*0.10	0	*0.00	67	2.91	57,420	2.90	75	Top 50
Owen	7	*0.33	3	*0.14	50	2.58	55,230	2.61	88	Top 50
Parke	3	*0.18	1	*0.06	20	1.49	22,927	1.33	0	
Perry	11	*0.57	2	*0.10	37	1.85	37,122	1.90	50	
Pike	5	*0.39	2	*0.16	14	*1.39	36,268	2.86	63	
Porter	122	0.74	14	*0.08	244	1.42	335,707	2.02	150	Top 25
Posey	7	*0.27	3	*0.12	30	1.27	54,915	2.15	38	
Pulaski	4	*0.31	4	*0.31	42	2.82	30,330	2.33	75	Top 50
Putnam	6	*0.16	3	*0.08	54	1.28	63,532	1.69	13	
Randolph	10	*0.39	3	*0.12	62	2.24	53,483	2.09	88	Top 50
Ripley	10	*0.35	2	*0.07	71	2.48	44,487	1.57	50	
Rush	43	2.51	24	1.40	56	2.29	36,745	2.16	163	Top 25
Saint Joseph	73	0.27	8	*0.03	247	0.88	475,880	1.78	125	Top 25
Scott	2	*0.08	1	*0.04	53	3.37	68,592	2.86	75	Top 50
Shelby	1	*0.02	0	*0.00	52	1.14	90,572	2.02	13	
Spencer	8	*0.38	2	*0.10	46	2.28	44,912	2.14	38	
Starke	1	*0.04	2	*0.09	133	4.05	59,251	2.55	88	Top 50
Steuben	57	1.67	6	*0.18	17	*0.52	53,966	1.57	88	Top 50
Sullivan	2	*0.09	1	*0.05	39	1.44	52,212	2.46	25	
Switzerland	4	*0.38	1	*0.10	21	2.53	18,732	1.78	25	
Tippecanoe	29	0.16	12	*0.07	104	0.68	286,870	1.59	75	Top 50
Tipton	10	*0.63	4	*0.25	27	1.50	29,859	1.91	75	Top 50
Union	2	*0.27	1	*0.14	21	2.65	11,791	1.62	38	
Vanderburgh	129	0.71	44	0.24	412	1.95	482,638	2.66	250	Top 10
Vermillion	0	*0.00	0	*0.00	31	2.15	29,488	1.86	13	
Vigo	30	0.28	5	*0.05	158	1.66	219,458	2.03	100	Top 50
Wabash	12	*0.37	4	*0.12	72	2.63	65,751	2.03	100	Top 50
Warren	3	*0.36	1	*0.12	7	*0.82	11,225	1.33	25	
Warrick	25	0.41	31	0.51	101	1.70	141,459	2.32	150	Top 25
Washington	9	*0.32	3	*0.11	27	0.67	61,585	2.22	38	
Wayne	7	*0.10	2	*0.03	125	2.02	167,041	2.46	88	Top 50
Wells	12	*0.43	12	*0.43	40	1.22	43,402	1.56	88	Top 50
White	2	*0.08	0	*0.00	35	1.29	56,236	2.30	13	
Whitley	15	*0.45	5	*0.15	25	1.43	64,446	1.94	50	
Indiana	2,590	0.40	1,000	0.15	9,993	1.52	12,735,878	1.94		

* 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 263. 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, 2012; Indiana Family and Social Services Administration, 2015; Indiana Board of Pharmacy, 2015

APPENDIX 12F

Total Priority Scores by County, Ranked in Descending Order (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2014; Indiana Automated Reporting Information Exchange System, 2013; Methamphetamine Lab Statistics, 2014; INSPECT data, 2014)

County	Total Priority Score	Rank
Vanderburgh	208	Top 10
Monroe	203	Top 10
Lake	188	Top 10
Howard	181	Top 10
Marion	169	Top 10
Madison	166	Top 10
Clark	162	Top 10
Tippecanoe	160	Top 10
LaPorte	152	Top 10
Allen	151	Top 25
Knox	147	Top 25
Morgan	143	Top 25
Saint Joseph	142	Top 25
Delaware	140	Top 25
Jackson	140	Top 25
Vigo	139	Top 25
Montgomery	138	Top 25
Marshall	137	Top 25
Porter	135	Top 25
Jefferson	133	Top 25
Bartholomew	132	Top 25
Kosciusko	132	Top 25
Starke	128	Top 25
Floyd	124	Top 50
Hamilton	122	Top 50
Wayne	117	Top 50
Fayette	117	Top 50
Rush	115	Top 50
Cass	112	Top 50
Grant	112	Top 50
Elkhart	109	Top 50
Hendricks	104	Top 50
Warrick	104	Top 50
Miami	104	Top 50
Steuben	102	Top 50
Johnson	102	Top 50
Noble	100	Top 50
Wabash	97	Top 50
Fulton	97	Top 50
DeKalb	92	Top 50
Dearborn	92	Top 50
Henry	91	Top 50
Lawrence	89	Top 50
Jay	88	Top 50
Decatur	88	Top 50
Gibson	87	Top 50

County	Total Priority Score	Rank
Orange	85	Bottom 50
Perry	81	Bottom 50
Jennings	78	Bottom 50
Hancock	75	Bottom 50
Parke	73	Bottom 50
Jasper	70	Bottom 50
Putnam	67	Bottom 50
Daviess	67	Bottom 50
Ripley	67	Bottom 50
Blackford	66	Bottom 50
Franklin	64	Bottom 50
Randolph	62	Bottom 50
Clinton	61	Bottom 50
Dubois	60	Bottom 50
Pulaski	59	Bottom 50
Martin	57	Bottom 50
Owen	57	Bottom 50
Spencer	55	Bottom 50
Greene	54	Bottom 50
Fountain	52	Bottom 50
Scott	50	Bottom 50
Clay	48	Bottom 50
Tipton	47	Bottom 50
LaGrange	44	Bottom 50
White	40	Bottom 50
Brown	38	Bottom 50
Ohio	37	Bottom 50
Washington	37	Bottom 50
Newton	36	Bottom 50
Crawford	36	Bottom 50
Adams	35	Bottom 50
Boone	35	Bottom 50
Posey	29	Bottom 50
Vermillion	29	Bottom 50
Pike	28	Bottom 50
Switzerland	28	Bottom 50
Union	28	Bottom 50
Whitley	28	Bottom 50
Huntington	22	Bottom 50
Shelby	22	Bottom 50
Warren	21	Bottom 50
Wells	20	Bottom 50
Benton	16	Bottom 50
Sullivan	16	Bottom 50
Harrison	15	Bottom 50
Carroll	14	Bottom 50

Note: Total priority scores ranged from 14 to 208. 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, 2012; Indiana Family and Social Services Administration, 2014; Indiana State Police, 2014, 2015; Indiana Board of Pharmacy, 2015

REFERENCES, CHAPTER 12

- Indiana Board of Pharmacy. (2015). *INSPECT datasets for 2014*. Data received February 2, 2015, from the Indiana Board of Pharmacy, Indiana Professional Licensing Agency.
- Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2014*. Indianapolis, IN: Indiana Family and Social Services Administration.
- Indiana State Police. (2014). *Automated Reporting Information Exchange System (ARIES), Vehicle Crash Records System*. Database maintained by the Indiana State Police and made available to the Center for Criminal Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University–Purdue University Indianapolis (November 21, 2014).
- Indiana State Police. (2015). *Final 2014 ISP lab stats*. Received January 22, 2015, from Niki Crawford, First Sergeant Commander, Methamphetamine Suppression Section, in an e-mail to the Center for Health Policy, Indiana University Richard M. Fairbanks School of Public Health at IUPUI.
- National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan. (2011). *Uniform Crime Reporting Program*. Available at <http://www.icpsr.umich.edu/NACJD/>

APPENDIX I: Data Sources Recommended by the State Epidemiology and Outcomes Work Group (SEOW)

Data Set	Source	Years	How to Access	Coverage	Target
Alcohol-Related Disease Impact (ARDI) Database	CDC	Based on averages 2006-2010	http://apps.nccd.cdc.gov/ardi/Homepage.aspx	U.S. and states	General population
Automated Reporting Information Exchange System (ARIES)	ISP	Annual Most recent 2013	On request from ISP	Indiana and counties	Vehicle collisions in general population
Behavioral Risk Factor Surveillance System (BRFSS)	CDC	Annual 1995-2013	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 2002-2012	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 1994-2012	http://www-fars.nhtsa.dot.gov/	U.S., states, and counties	General population
Hospital Discharge Database	ISDH	Annual 1999-2013	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 2009-2014	http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey	Indiana	College students
Indiana Clandestine Meth Lab Seizures	ISP	Annual 1995-2014	On request from ISP	Indiana and counties	General population
Indiana Youth Survey (Previously known as Alcohol, Tobacco, and Other Drug Use Among Indiana Children and Adolescents)	IPRC	Annual 1993-2014	http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey	Indiana and regions	6th – 12th grade students
Indiana Youth Tobacco Survey (IYTS)	ISDH/Tobacco Prevention and Cessation Commission	Bi-annual 2000-2012	On request from ISDH	Indiana	6th – 12th grade students

Continued on Next Page

APPENDIX I (continued)

Data Set	Source	Years	How to Access	Coverage	Target
Monitoring the Future (MTF) Survey	NIDA	Annual 1999-2014	http://www.monitoringthefuture.org/data/data.html	U.S.	8th, 10th, and 12th grade students
Mortality data (e.g., alcohol-, smoking-, and drug-related mortality)	ISDH	Annual Most recent 2011	On request from ISDH	Indiana and counties	General population
	CDC	Annual 1999-2012	http://wonder.cdc.gov/mortSQL.html	U.S., states, and counties	General population
National Survey on Drug Use and Health (NSDUH)	SAMHSA	Annual 1994-2013	http://www.samhsa.gov/data/population-data-nsduh	U.S., states, and some sub-state estimates	Population 12 years and older
National Youth Tobacco Survey (NYTS)	CDC	Bi-annual 1999-2012	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
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 1992-2012	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 1994-2012	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	General population ages 12+	NSDUH
	Past-month binge drinking		
	Alcohol dependence or abuse in the past year		
	Needing but not receiving treatment for alcohol use in the past year	Adults ages 18+	BRFSS
	Past-month alcohol use		
	Past-month binge drinking		
	Past-month heavy drinking	Grades 9-12	YRBSS
	Past-month alcohol use		
	Past-month binge drinking		
	Lifetime use	Grades 6-12	Indiana Youth Survey
	Past-month use		
Tobacco	Use reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Primary use (dependence) reported at treatment admission		
	Arrests for		
	DUI	General population	UCR
	Public intoxication		
	Liquor law violation		
	Alcohol-related crashes	General population	ARIES
	Alcohol-related fatal crashes		
	Alcohol-attributable deaths		
	Alcohol-attributable fractions	General population	ARDI
	Past-month use of		
	Tobacco product		
	Cigarettes	General population ages 12+	NSDUH
	Past-month smoking		
	Four-level smoking status (smoked every day)		
	Past-month use of	Adults ages 18+	BRFSS
	Tobacco		
	Cigarettes		
	Smokeless tobacco	Middle and high school students	IYTS
	Lifetime and past-month use of cigarettes		
	Past-month use of		
	Any tobacco	Grades 9-12	YRBSS
	Cigars		
	Smokeless tobacco		
	Lifetime use	Grades 6-12	Indiana Youth Survey
	Past-month use		

Continued on Next Page

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	General population ages 12+	NSDUH
	Past-month use		
	Past-month use	Grades 9-12	YRBSS
	Tried marijuana before age 13		
	Lifetime use	Grades 6-12	Indiana Youth Survey
	Past-month use	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
Cocaine	Use reported at treatment admission		
	Primary use (dependence) reported at treatment admission	General population	UCR
	Arrests for Possession of marijuana Sale of marijuana		
	Past-year use	General population ages 12+	NSDUH
	Lifetime use	Grades 9-12	YRBSS
	Past-month use		
Heroin	Lifetime and past-month use of Cocaine Crack	Grades 6-12	Indiana Youth Survey
	Use reported at treatment admission		
	Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Arrests for Possession of cocaine/opiates Sale of cocaine/opiates	General population	UCR
	Lifetime, past-year, and past-month use (aggregated data 2002-2004)		
	Lifetime use of heroin	General population ages 12+	NSDUH
Methamphetamine	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	Indiana Youth Survey
	Use reported at treatment admission		
	Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Arrests for Possession of cocaine/opiates Sale of cocaine/opiates	General population	UCR
Methamphetamine	Lifetime, past-year, and past-month use (aggregated data 2002-2004)		
	Lifetime use	General population ages 12+	NSDUH
		Grades 9-12	YRBSS

Continued on Next Page

APPENDIX II (continued)

SUBSTANCE	PATTERN OR CONSEQUENCE	TARGET POPULATION	DATASET
Methamphetamine (cont.)	Lifetime use	Grades 6-12	Indiana Youth Survey
	Past-month use		
	Use reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Primary use (dependence) reported at treatment admission		
Prescription Drugs	Arrests for Possession of synthetic drugs	General population	UCR
	Sale of synthetic drugs		
	Clandestine meth lab seizures	General population	ISP Meth Lab Seizures
	Children identified/rescued in lab homes		
	Arrests made during lab seizures		
	Past-year nonmedical use of pain relievers	General population ages 12+	NSDUH
	Lifetime and past-month use of Prescription painkillers	Grades 6-12	Indiana Youth Survey
	Prescription drugs		
	Tranquilizers	General population	INSPECT
	Past-year dispensation of Opioids		
Polysubstance Abuse	CNS depressants		
	Stimulants		
	Use reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Primary use (dependence) reported at treatment admission	General population	UCR
Miscellaneous	Arrests for Possession of 'other drugs'		
	Sale of 'other drugs'		
	Use of 2+ substances reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	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.

MARIJUANA
COCAINE
PRESCRIPTION DRUGS

**THE CONSUMPTION AND CONSEQUENCES
OF ALCOHOL, TOBACCO, AND DRUGS IN INDIANA:
A STATE EPIDEMIOLOGICAL PROFILE
2014**

INDIANA STATE EPIDEMIOLOGY AND OUTCOMES WORKGROUP

The Indiana State Epidemiology and Outcomes Workgroup (SEOW) was established in April 2006 to review epidemiological data on the patterns and consequences of substance use and abuse in Indiana and to make recommendations to the State of Indiana regarding priorities for prevention funding for the following year. The priorities were developed based on a systematic analysis of available data, the results of which are detailed in this report.



**RICHARD M. FAIRBANKS
SCHOOL OF PUBLIC HEALTH**

INDIANA UNIVERSITY
Center for Health Policy
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."*

TOBACCO
HEROIN
METHAMPHETAMINE
ALCOHOL