INDIANA
CENTER FOR HEALTH POLICY
RESEARCH FOR A HEALTHIER INDIANA
AUGUST 2008

Prescription Drug Abuse Is a Growing Problem in Indiana

When taken under the supervision of a physician, prescription drugs can be lifesaving, but when abused, they can be as life-threatening as illicit drugs. Prescription drugs are the second most commonly abused category of drugs, less common than marijuana, but more common than cocaine, heroin, methamphetamine, and other drugs.[1] The nonmedical or recreational use of prescription medications is a serious public health concern in the United States.

Although many prescription drugs have the potential for abuse, some are more often misused than others. The three prescription drug classes that are most commonly abused are:

1. opioids, which are generally prescribed to treat pain (pain relievers),
2. central nervous system (CNS) depressants, used to treat anxiety and sleep disorders (sedatives and tranquilizers), and
3. stimulants, prescribed to treat the sleep disorder narcolepsy, obesity, and attention-deficit hyperactivity disorder (ADHD).[2]

Table 1 shows the three major prescription drug classes that are most often abused and their most common trademark names.

Table 1: Major Classes of Prescription Drugs and Their Most Common Medications (Trademark Names are Shown in Parenthesis)

Opioids	Central Nervous System (CNS) Depressants	Stimulants
Oxycodone (OxyContin, Percodan, Percocet)	*Barbiturates*	Dextroamphetamine (Dexedrine and Adderall)
Propoxyphene (Darvon)	Mephobarbital (Mebaral)	Methylphenidate (Ritalin and Concerta)
Hydrocodone (Vicodin, Lortab, Lorcet)	Pentobarbital sodium (Nembutal)	
Hydromorphone (Dilaudid)	*Benzodiazepines*	
Meperidine (Demerol)	Diazepam (Valium)	
Diphenoxylate (Lomotil)	Chlordiazepoxide hydrochloride (Librium)	
Morphine (Kadian, Avinza, MS Contin)	Alprazolam (Xanax)	
Codeine	Triazolam (Halcion)	
Fentanyl (Duragesic)	Estazolam (ProSom)	
Methadone	Clonazepam (Klonopin)	
	Lorazepam (Ativan)	

Source: National Institute on Drug Abuse. (2005). *Prescription drugs: Abuse and addiction.* Research Report Series

According to the 2006 Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey on Drug Use and Health (NSDUH), the most recent report available, more than one-fifth (20.3%) of the respondents ages 12 and older reported that they had abused psychotherapeutics[3] at least once in their life; 6.6 percent reported abusing them in the past year, and 2.8 percent reported abusing them in the past month.

Pain relievers are the prescription drug category most widely abused. The rate of nonmedical pain reliever use increased significantly from 2002 to 2006—from 12.6 percent to 13.6 percent for lifetime use, from 4.7 percent to 5.1 percent for past-year use, and from 1.9 percent to 2.1 percent for past-month use. When asked where they obtained the drugs, over half of the nonmedical users of prescription medication said they received them most recently "from a friend or relative for free."[4]

Adolescents ages 12 to 17 who had used stimulants nonmedically in the past year were more likely in that same period to have used other illicit drugs, to have participated in other delinquent behaviors, and to have experienced a major depressive episode than youths who did not use.[5]

The misuse of prescription medications can have serious consequences, similar to the problems associated with illicit drug use. In 2005, approximately 600,000 visits to U.S. emergency departments involved the nonmedical use of prescription or over-the-counter (OTC) pharmaceuticals or dietary supplements. More than half of these visits (55%) involved the use of multiple drugs.[6] Substance abuse treatment data for publicly-funded services show that in 2005, prescription drug abuse was reported at admission in more than 200,000 treatment episodes.[7] The nonmedical use of psychotherapeutics is also associated with legal consequences. During 2005, approximately 346,000 arrests were made in the United States for possession or sale/manufacture of dangerous non-narcotic drugs, including barbiturates (CNS depressants) and Benzedrine (a stimulant).[8]

Prescription Drug Abuse Epidemiology in Indiana

The prevalence of nonmedical (recreational) prescription drug use among Hoosiers 12 years and older is 20.7 percent for lifetime use, 7.6 percent for past-year use, and 2.7 percent for past-month use. Prevalence rates are based on annual averages from 2002 through 2004, the most recent estimates available from the National Survey on Drug Use and Health.

Most misuse of psychotherapeutics involves pain relievers (see Table 2). And nonmedical use of psychotherapeutics is highest among young people—17.8 percent of 18- to 25-year-olds reported past-year use, followed by 12- to 17-year-olds with 9.5 percent; and lowest among adults age 26 and older with 5.4 percent reporting past-year use. The rate of past-year prescription drug abuse of Hoosiers ages 18 to 25 (17.8%) is significantly higher than rates among their U.S. counterparts (14.5%), but comparisons between Indiana and the nation across other age groups show no statistical differences.[9]

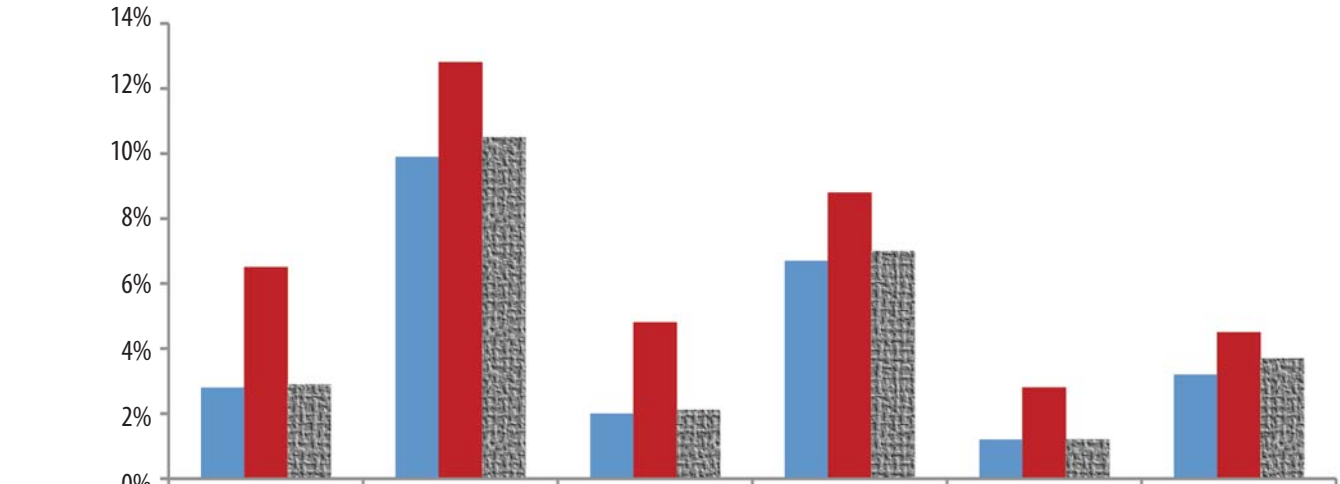
Oxycodone (OxyContin, Percodan, and Percocet) is one of the most widely prescribed pain relievers. Purchase and consumption of this opioid have increased dramatically in

Table 2: Numbers and Percentages of Indiana Residents 12 Years and Older Reporting Nonmedical Use of Psychotherapeutics

Type of Rx Drug	Lifetime Use	Past-Year Use	Past-Month Use
All psychotherapeutics	1,048,000	383,000	138,000
	20.7%	7.6%	2.7%
Pain relievers	756,000	306,000	102,000
	15.0%	6.1%	2.0%
Tranquilizers	460,000	142,000	39,000
	9.1%	2.8%	0.8%
Stimulants	420,000	84,000	38,000
	8.3%	1.7%	0.8%
Sedatives	197,000	20,000	7,000
	3.9%	0.4%	0.1%

Source: Based on annual averages from 2002 through 2004 from theSubstance Abuse and Mental Health Services Administration and Office of Applied Studies. (2008). *National Survey on Drug Use and Health*, retrieved June 2, 2008, from https://nsduhweb.rti.org/

Figure 1: Prevalence Rates of Ritalin, Tranquilizers, and Narcotics Use among Indiana Middle and High School Students, 2007



	Lifetime Use		Annual Use		Monthly Use	
	Middle School	High School	Middle School	High School	Middle School	High School
Ritalin	2.8%	9.9%	2.0%	6.7%	1.2%	3.2%
Tranquilzers	6.5%	12.8%	4.8%	8.8%	2.8%	4.5%
Narcotics	2.9%	10.5%	2.1%	7.0%	1.2%	3.7%

Source: Indiana Prevention Resource Center. (2008). *Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents.* Institute for Drug Abuse Prevention, Indiana University Bloomington.

Indiana. Data from the U.S. Drug Enforcement Administration show that in 2002, more than 29 million dosage units of oxycodone were purchased by Hoosier retail registrants (pharmacies, hospitals, and practitioners). This number is projected to rise to nearly 54 million for 2007—a rate of 8.5 dosage units per Indiana resident[10] and an 86 percent increase from 2002 to 2007.

The Indiana Prevention Resource Center used the annual Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) Survey to collect information on substance use, gambling behaviors, and risk and protective factors among Indiana students in middle school (grades 6 through 8) and high school (grades 9 through 12). Patterns of non-prescribed recreational use of Ritalin (a stimulant), tranquilizers, and narcotics are much higher for the older students, i.e., prevalence for lifetime, annual, and monthly use of these substances is significantly higher among high school students than middle school students.[11] Figure 1 shows 2007 prevalence rates among students.

CONSEQUENCES OF PRESCRIPTION DRUG MISUSE AND ABUSE

Individuals abuse prescription medications for many reasons. The effects of intentional abuse differ by type of drug, but generally, people use pain relievers and other psychopharmaceuticals because they believe the myth that these drugs provide a medically safe high. The types of prescription drugs most likely to be abused and their effects include:[12]

- **Opioids** (pain relievers, narcotics) alleviate pain; they also can induce drowsiness and mediate a feeling of pleasure, resulting in the initial euphoria that is often experienced during use.
- **CNS depressants** (sedatives, tranquilizers) increase activity of the neurotransmitter gamma-aminobutyric acid (GABA) in the brain; GABA decreases brain activity and produces a drowsy or calming effect.
- **Stimulants** (amphetamines) increase levels of norepinephrine and dopamine in the brain and body, resulting in an increase

in alertness, attention, and energy. The increase in dopamine is also associated with a sense of euphoria.

Medical and Health Consequences

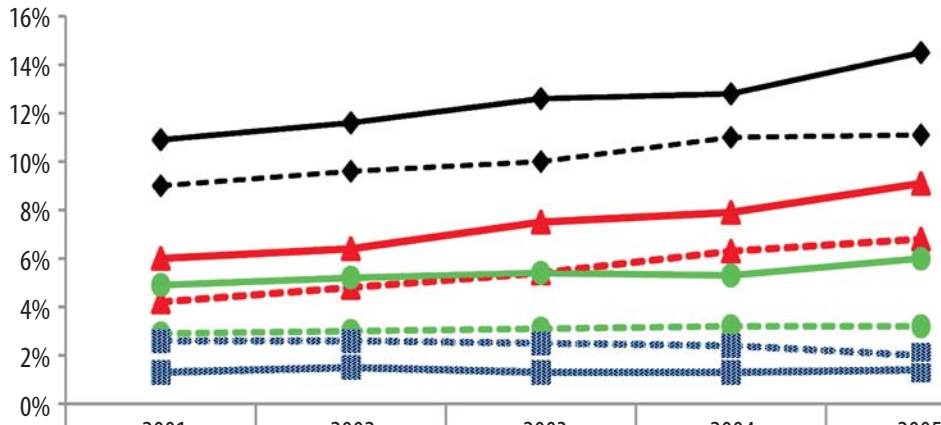
The health consequences of prescription drug abuse differ by type of drug. Stimulants can elevate blood pressure, increase heart rate and respiration, cause sleeping difficulties, and elicit paranoia. Their continued abuse, or even one high dose, can cause irregular heartbeat, heart failure, and seizures. Painkillers and CNS depressants can cause depressed respiration and even death. Also, CNS depressants can induce seizures when a reduction in their chronic use triggers a sudden rebound in brain activity.

One particularly dangerous type of abuse occurs when young people indiscriminately mix and share prescription drugs and other substances (polysubstance abuse), for example, by combining psychotherapeutics with alcohol and/or other drugs. This practice often includes the use of opiate analgesics, the most frequently prescribed medication with more than 100 million prescriptions written every year. This risky practice is likely to contribute to the growing trend of drug abuse-related emergency room visits involving prescribed narcotics.[13] In 2005, nearly 108 million visits to emergency departments (ED) were recorded in the United States, and approximately 1.5 million of these visits involved drug misuse or abuse.

A close look at substance-attributable ED visits shows that

- 27 percent of visits involved pharmaceuticals[14] only;
- 10 percent involved alcohol with pharmaceuticals;

Figure 2: Percentage of Indiana and U.S. Residents in Publicly-Funded Substance Abuse Treatment Who Reported Prescription Drug Abuse at the Time of Admission, by Drug Category and Year



	2001	2002	2003	2004	2005
Indiana all Rx drugs	10.9%	11.6%	12.6%	12.8%	14.5%
U.S. all Rx drugs	9.0%	9.6%	10.0%	11.0%	11.1%
Indiana pain reliever	6.0%	6.4%	7.5%	7.9%	9.1%
U.S. pain reliever	4.2%	4.8%	5.4%	6.3%	6.8%
Indiana sedative/tranquilizers	4.9%	5.2%	5.4%	5.3%	6.0%
U.S. sedative/tranquilizers	2.9%	3.0%	3.1%	3.2%	3.2%
Indiana stimulants	1.3%	1.5%	1.3%	1.3%	1.4%
U.S. stimulants	2.6%	2.6%	2.5%	2.4%	2.0%

Source: Substance Abuse and Mental Health Data Archive. (2008). *Treatment Episode Data Set (TEDS) Series*. Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services.

- 8 percent involved illicit drugs with pharmaceuticals; and
- 4 percent involved illicit drugs with both pharmaceuticals and alcohol.[15]

The number of drug-related ED visits remained stable from 2004 to 2005, and no significant changes were detected for ED visits attributable to major illicit drugs or alcohol. However, ED visits related to nonmedical use of prescription drugs, OTC pharmaceuticals, or dietary supplements increased 21 percent from 2004 to 2005. The majority of drug-related suicide attempts involved pharmaceuticals.[16]

Opiates, CNS depressants, and stimulants are highly addictive, especially if abused repeatedly, at high doses, and/or by susceptible individuals.[17] According to 2005 data from the Treatment Episode Data Set (a national database of information about individuals at or below the 200 percent of the federal poverty level who receive publicly-funded substance abuse services), overall prescription drug abuse is significantly higher in Indiana (14.5%) than the nation (11.0%). This holds true for pain reliever use (IN: 9.1%; U.S.: 6.8%) and sedative/tranquilizer use (IN: 6.0%; U.S.: 3.2%); however, stimulant use is greater among the U.S. population (IN: 1.4%; U.S. 2.1%). Moreover, overall prescription drug abuse in Indiana has increased significantly over the years, from roughly 11 percent in 2001 to nearly 15 percent in 2005 (see Figure 2). The percentage of individuals in treatment dependent on prescription drugs is also higher for Indiana (6.7%) than for U.S. residents (5.3%), and rates increased significantly among Hoosiers from 4.8 percent in 2001 to 6.7 percent in 2005.[18]

Drug-Related Mortality

Drug-related mortality statistics include two types of deaths from substance abuse, classified as accidental drug overdoses and fatal medication errors.

Accidental drug overdose is a concern for those who abuse prescription drugs. The mortality rates from unintentional drug overdoses (not including alcohol) have risen steadily since the early 1970s, and have reached historic highs in the past ten years. The increase from 1999 to 2004 was driven largely by opioid analgesics (prescription painkillers), with a smaller contribution from cocaine, but essentially no contribution from heroin. The number of deaths in the narcotics category nationally that involved prescription opioid analgesics increased from 2,900 in 1999 to at least 7,500 in 2004—an increase of 160 percent. By 2004, deaths from opioid painkillers numbered more than the total of deaths involving heroin and cocaine in this category.[19] In Indiana, the number of drug-induced deaths (including deaths from all drugs) increased from 245 in 1999 to 665 in 2005—an increase of over 170 percent.[20]

Fatal medication errors (FMEs) include deaths due to accidental drug overdoses and due to the wrong drug given or taken in error. FMEs can result from either prescription or over-the-counter (OTC) medications, but they do not include accidental overdoses from street drugs and alcohol, suicides and homicides by poisoning, and deaths caused by adverse effects of pharmaceuticals. A study published this year[21] revealed that the overall death rate for FMEs increased by 360.5% between 1983 and 2004. The researchers noted a particularly steep increase (3,196%) in incidents of FMEs occurring at home in combination with alcohol and/or street drugs. A possible conclusion of these findings is that the consumption of medication at home together with the use of multiple substances (polysubstance abuse) increases the risk of FMEs.

Legal/Criminal Consequences

Various federal agencies are involved in the enforcement of crimes associated with prescription drug diversion. The Food and Drug Administration's (FDA) Office of Criminal Investigation together with the U.S. Drug Enforcement Administration (DEA) investigates the illegal sale, use, and diversion of controlled substances, including illegal sales over the Internet. The FDA and U.S. Customs and Border Protection conduct spot examinations of mail and courier shipments to check for foreign drugs being sent to U.S. consumers. Additionally, the Department of Justice prosecutes doctors and pharmacies who illegally distribute via the Internet.[22]

The Uniform Crime Reporting (UCR) system is a national database maintained by the FBI that is used to track the number of arrests of property and violent crimes as well as drug-related crimes throughout the United States. Data are submitted by law enforcement agencies and available at the county level. A limitation of the data set is that states are not required to submit their information, so reporting levels vary.

To estimate missing arrest data, the FBI uses a statistical algorithm.[23] Based on UCR estimates, the number of arrests for possession of dangerous non-narcotic drugs (barbiturates and Benzedrine) in Indiana increased from 1,617 in 1999 to 2,620 in 2005—a 62 percent increase. Similarly, arrests for sale/manufacture of these substances rose from 316 in 1999 to 746 in 2005—a 136 percent increase (see Figure 3). A comparison of Indiana and U.S. arrest rates for possession and sale/manufacture of dangerous non-narcotics reveals a significant increase in rates on the national and state levels over the years and substantially higher rates in the United States than Indiana (see Figure 4).[24]

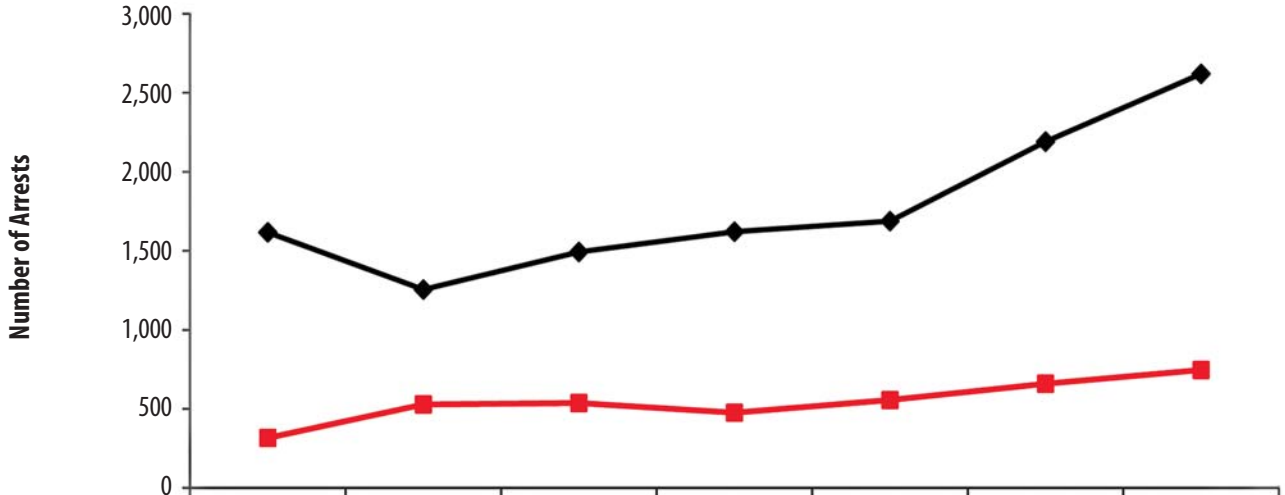
RISK FACTORS AND VULNERABLE POPULATIONS

Researchers have shown that people with certain characteristics are more or less likely to abuse prescription drugs. Simoni-Wastila and Strickler[25] found that in the general population, being female, being in poor or fair health, and drinking alcohol daily are risk factors for nonmedical prescription drug use. On the other hand, those who are young (25 or younger) and have full-time employment are less likely to engage in problem use.

Analyses from the 2005 Indiana Treatment Episode Data Set,[26] the most recent statistics now available, show that:

- Whites are most likely to report prescription drug abuse at the time of treatment admission compared to Blacks and other races (odds ratio = 2.1; $P < 0.001$).
- Women are more likely than men to report prescription drug abuse at the time of treatment admission (odds ratio = 1.8; $P < 0.001$).
- Adults ages 18 to 34 are more likely than any other age group to report prescription drug abuse at the time of treatment admission (odds ratio = 1.4; $P < 0.001$).
- Individuals who abuse prescription drugs are more likely to engage in polysubstance abuse (odds ratio = 4.6; $P < 0.001$).

Figure 3: Number of Arrests for Possession and Sale/Manufacture of Dangerous Non-Narcotic Drugs in Indiana (Uniform Crime Reports, 1999-2005)

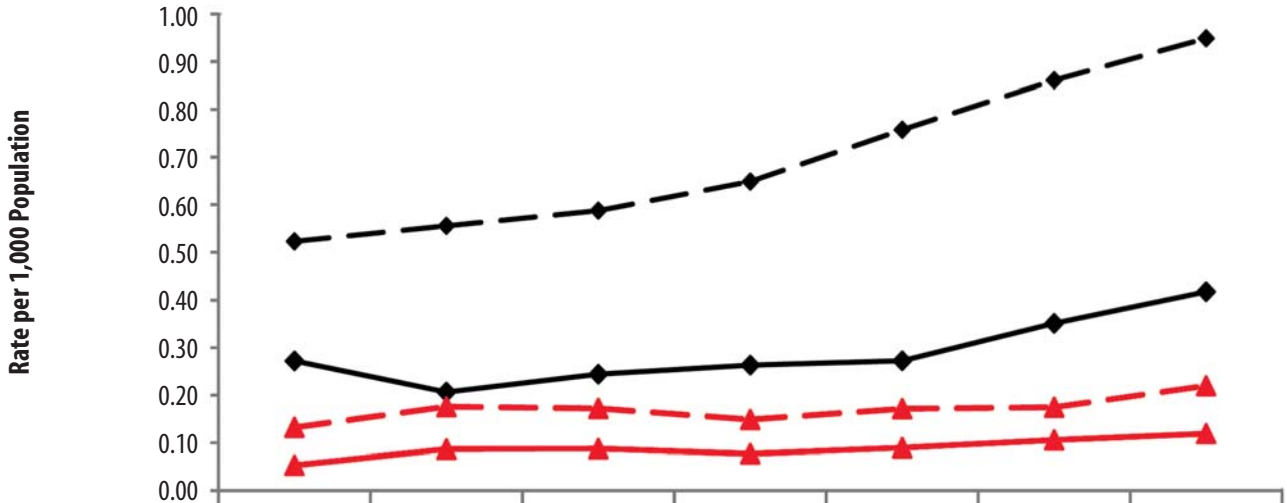


	1999	2000	2001	2002	2003	2004	2005
Possession	1,617	1,255	1,493	1,621	1,688	2,191	2,620
Sale	316	528	537	476	556	659	746

Source: National Archive of Criminal Justice Data, *Uniform Crime Reporting Program*. (n.d.). Federal Bureau of Investigation.

The elderly (65 and older) are also vulnerable to prescription drug misuse and abuse. Older people are more likely to be prescribed long-term and multiple prescriptions and this can lead to unintentional misuse. In addition, many older adults also use over-the-counter (OTC) medicines and dietary supplements regularly. Prescription and OTC drug abuse can have more adverse health consequences for the elderly because of high rates of comorbid illnesses, changes in drug metabolism with age, and the potential for drug interactions. For example, older people who take benzodiazepines are at an increased risk for cognitive impairment associated with the drug, sometimes leading to falls (causing hip and thigh fractures) and vehicle accidents.[27]

Figure 4: Arrest Rates, per 1,000 Population, for Possession and Sale/Manufacture of Dangerous Non-Narcotic Drugs in Indiana and the United States (Uniform Crime Reports, 1999-2005)



	1999	2000	2001	2002	2003	2004	2005
Indiana Possession	0.27	0.21	0.24	0.26	0.27	0.35	0.42
U.S. Possession	0.52	0.56	0.59	0.65	0.76	0.86	0.95
Indiana Sale	0.05	0.09	0.09	0.08	0.09	0.11	0.12
U.S. Sale	0.13	0.18	0.17	0.15	0.17	0.17	0.22

Source: National Archive of Criminal Justice Data. (n.d.). *Uniform Crime Reporting Program.* Federal Bureau of Investigation.

THOUGHTS FOR POLICYMAKERS

The Indiana General Assembly passed legislation in the mid-1990s that requires collection of information about controlled substances through the Central Repository for Controlled Substances Data program. Initially, Indiana's prescription drug monitoring program required pharmacies to report only on schedule II controlled substances. In 2004, due to a grant and legislative action (IC 35-48-7), the Indiana Scheduled Prescription Electronic Collection and Tracking (INSPECT) program was created, expanding reporting requirements to include schedule II through V controlled substances[28] (see box below for additional information).[29]

Indiana Tracks Prescription Drugs Through the INSPECT Program

The INSPECT program continues to be funded in part by the Harold Rogers Prescription Drug Monitoring Training and Technical Assistance Program. This federal grant program was created by the Department of Justice Appropriations Act, 2002 (Public Law 107-77) and received fiscal year 2008 funding under the Consolidated Appropriations Act, 2008 (Public Law 110-161).[30] Additional funding is provided by the state, derived from a percentage of controlled substance licensing fees. Each time a controlled substance is dispensed, the dispenser is required to submit the following information to INSPECT:[31]

A. the recipient's name,
B. the recipient's or the recipient representative's identification number or the identification number or phrase designated by the central repository,
C. the recipient's date of birth,
D. the national drug code number of the controlled substance dispensed,
E. date the controlled substance is dispensed,
F. quantity of the controlled substance dispensed,
G. number of days of supply dispensed,
H. the dispenser's U.S. Drug Enforcement Agency registration number,
I. the prescriber's U.S. Drug Enforcement Agency registration number, and
J. the patient's address, including city, state and ZIP code.

In spite of these expanded monitoring efforts, the nonmedical use of addictive prescription drugs continues to rise. This increase is, at least in part, fueled by the fact that there is relatively little stigma associated with these pharmaceuticals, even when taken recreationally, because they are legally manufactured for a legitimate medical purpose. Prescription drug abusers frequently feel a false sense of security—since doctors can and do prescribe these drugs, many users believe that they cannot be as harmful as conventional street drugs such as heroin or cocaine.

Prescription medicines are widely available and easily accessible, and this is a key factor in abuse rates. They are often illegally acquired through a parent's medicine cabinet, friends' prescriptions, "doctor shopping," and the Internet.

Unfortunately, the Internet has become one of the fastest growing methods for obtaining controlled pharmaceuticals, but it is important to note that not all pharmacies that provide online services are illegitimate. The National Association of Boards of Pharmacy has established a registry of online pharmacies that operate in a legal and medically sound fashion and meet certain criteria. However, some online "pharmacies" do illegally sell controlled substances to the public beyond the bounds of what is safe and legal.[32]

> *"The legal or licensed [Internet] pharmacies do submit data [to the INSPECT program]. The illegal [Internet] pharmacies are just that—'illegal.' They are not licensed. They are not requiring prescriptions. They are not operating within any normal guidelines. The laws attempting to govern this practice are very difficult to enforce. They hide their location so they don't get busted."*
>
> DONNA S. WALL, INDIANA STATE BOARD OF PHARMACY (E-MAIL CORRESPONDENCE, 7/15/2008)[33]

To target all the factors that play a role in prescription drug abuse, effective policy interventions should include comprehensive strategies and address at least the following four areas.

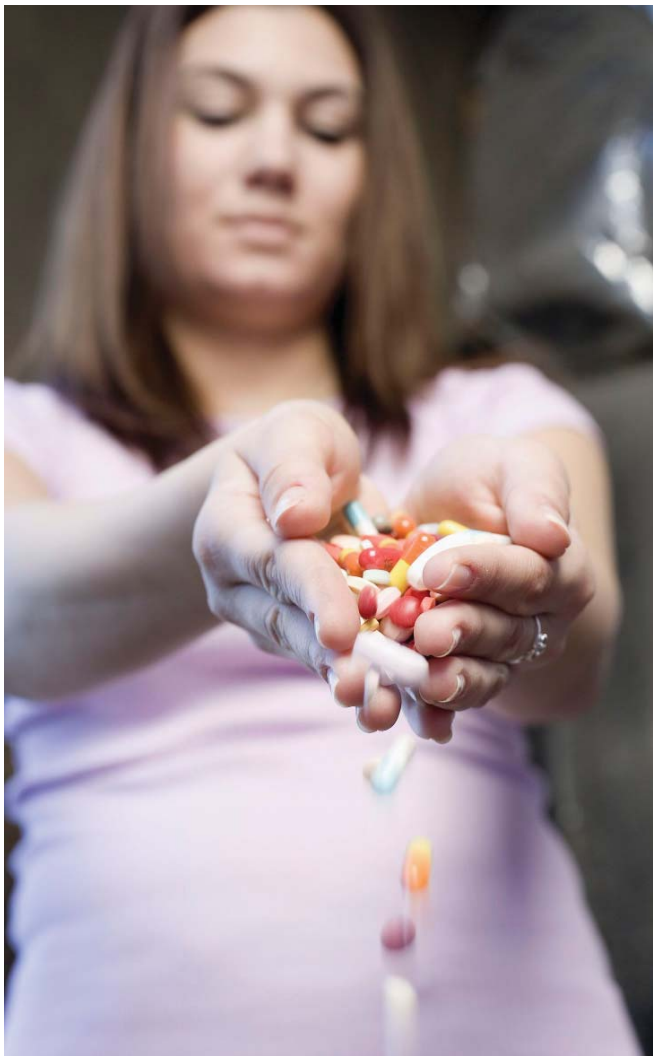
Laws and enforcement—Tighter control of online pharmacies and Internet drug sales would decrease availability of prescription pharmaceuticals without limiting access to individuals who have a legitimate medical need for these substances. Additionally, laws comparable to the social host liability laws for alcohol and the teen party ordinances could be implemented to place greater responsibility on adults. Under social host liability laws, adults who provide alcohol to a person under the age of 21 can be held liable if that minor is killed or injured or kills or injures another person. Teen party ordinances make it illegal to host a party where underage drinking occurs; under this law, the offense is the hosting of the party *itself* and adults can be arrested if they allow a drinking party to occur with their knowledge. Similar versions of these laws focusing on prescription pharmaceuticals would encourage adults who legitimately use such medications to monitor their supply more carefully.

Community norms—Increased awareness among the public of the potential risks of prescription medication misuse (e.g., risks of dependency, addiction, potential overdose, and medical and legal consequences) will help change community norms and defy the myth of medically-safe recreational drug use. Public education targeting parents, grandparents, and youth should be used to inform the public about the dangers of prescription drug abuse and the methods that users may employ to obtain drugs (such as "doctor-shopping," taking pills from family's or friends' prescriptions, and online pharmacies).

Support for health care providers—More education and support services should be available to health care professionals to help them identify drug-seeking behaviors in patients and address treatment needs. The INSPECT database is a valuable tool for providers to query patients' prescription drug history and screen for potential problems. Dissemination of information about drug treatments, interventions, and facilities will also make it easier for providers to refer clients to the right programs.

Polysubstance abuse—Prescription drug abuse is associated with polysubstance abuse (the use of two or more substances). Hoosiers in treatment who use prescription drugs are more likely to be multiple-substances users.[34] Also, a study done at a Midwestern university suggests that most nonmedical users of prescription pharmaceuticals are polydrug users and should be screened for potential drug abuse or dependence.[35]

Prescription drug abuse poses a unique challenge due to the need to balance prevention and law enforcement strategies with legitimate access to drugs for medical purposes. Policymakers must carefully consider policy initiatives that may impact the legitimate needs of those in severe pain. Pain management has emerged as a critical clinical concern and is often essential during recovery from severe illness and surgical procedures.[36/37]



Notes

[1]Office of National Drug Control Policy. (n.d.). *Prescription drugs.* Retrieved June 2, 2008, from http://www.whitehousedrugpolicy.gov/drugfact/prescrptn_drgs/index.html

[2]National Institute on Drug Abuse, National Institutes of Health. (July 2001, Revised August 2005). *Prescription drugs: Abuse and addiction.* NIH Publication Number 05-4881. Retrieved July 30, 2008, from the NIDA Web site from http://www.nida.nih.gov/PDF/RRPrescription.pdf

[3]Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives, but does not include over-the-counter drugs. Source: Substance Abuse and Mental Health Services Administration and Office of Applied Studies. (2008). *National Survey on Drug Use and Health.* Retrieved June 2, 2008, from https://nsduhweb.rti.org/

[4]Substance Abuse and Mental Health Services Administration and Office of Applied Studies. (2008). *National Survey on Drug Use and Health.* Retrieved June 2, 2008, from https://nsduhweb.rti.org/

[5]Substance Abuse and Mental Health Services Administration. (2008, February 28). *The NSDUH report: Nonmedical stimulant use, other drug use, delinquent behaviors, and depression among adolescents.* Retrieved July 30, 2008, from the U.S. Department of Health and Human Services Web site from http://www.oas.samhsa.gov/2k8/stimulants/depression.htm

[6]Substance Abuse and Mental Health Services Administration and Office of Applied Studies. (n.d.). *Drug Abuse Warning Network, 2005: National estimates of drug-related emergency department visits.* Retrieved June 3, 2008, from http://dawninfo.samhsa.gov/pubs/edpubs/default.asp

[7]Substance Abuse and Mental Health Data Archive. (2008). *Treatment Episode Data Set (TEDS) Series.* Ann Arbor, MI: Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services.

[8]National Archive of Criminal Justice Data. (n.d.). *Uniform Crime Reporting Program.* Federal Bureau of Investigation. Available on-line from http://www.icpsr.umich.edu/NACJD/

[9]Substance Abuse and Mental Health Services Administration and Office of Applied Studies. (2008). *National Survey on Drug Use and Health.* Retrieved June 2, 2008, from https://nsduhweb.rti.org/

[10]Data on state of Indiana oxycodone purchases 2002-2007. (2007). Unpublished data prepared from ARCOS by the Pharmaceutical Investigations Section, Targeting and Analysis Unit, Office of Enforcement Operations, U.S. Drug Enforcement Agency, Received from Dennis Wichern.

[11]Indiana Prevention Resource Center. (2007). *Alcohol, tobacco, and other drug use by Indiana children and adolescents.* Bloomington, IN: Institute for Drug Abuse Prevention, Indiana University.

[12]National Institute on Drug Abuse. (2006). *NIDA info facts: Prescription pain and other medications.* Retrieved July 23, 2008, from http://www.nida.nih.gov/Infofacts/Painmed.html

[13]Volkow, N.D. (2006). *Testimony on prescription drug abuse before the Subcommittee on Criminal Justice, Drug Policy, and Human Resources, Committee on Government Reform, U.S. House of Representatives.* Washington, DC: National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services.

[14]Pharmaceuticals include prescription and over-the-counter drugs as well as dietary supplements.

[15]Substance Abuse and Mental Health Services Administration and Office of Applied Studies. (n.d.). *Drug Abuse Warning Network, 2005: National estimates of drug-related emergency department visits.* Retrieved June 3, 2008, from http://dawninfo.samhsa.gov/pubs/edpubs/default.asp

[16]Substance Abuse and Mental Health Services Administration and Office of Applied Studies. (n.d.). Ibid.

[17]Volkow, N.D. Op cit.

[18]Substance Abuse and Mental Health Data Archive. (2008). *Treatment Episode Data Set (TEDS) Series.* Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. Accessed August 4, 2008 from the Substance Abuse and Mental Health Data Archive from http://www.icpsr.umich.edu/SAMHDA/index.html

[19]Paulozzi, L.J. (2008). *Trends in unintentional drug overdose deaths.* Testimony before the Senate Judiciary Subcommittee on Crime and Drugs. U.S. Department of Health and Human Services.

[20]Public Health System Development & Data Commission, and Data Analysis Team. (2007). Data on drug-induced deaths in Indiana, by county, 1999-2005. Indiana State Department of Health.

[21]Phillips, D.P., Barker, G.E.C., & Eguchi, M.M. (2008). A steep increase in domestic fatal medication errors with use of alcohol and/or street drugs. *Archives of Internal Medicine, 168,* 1561-1566.

[22]Office of National Drug Control Policy. (n.d.). *Prescription drugs.* Retrieved June 2, 2008, from http://www.whitehousedrugpolicy.gov/drugfact/prescrptn_drgs/index.html

[23]National Archive of Criminal Justice Data. (n.d.). *Uniform Crime Reporting Program.* Federal Bureau of Investigation.

[24]National Archive of Criminal Justice Data, ibid.

[25]Simoni-Wastila, L., & Strickler, G. (2004). Risk factors associated with problem use of prescription drugs. *American Journal of Public Health, 94,* 266-268.

[26]Substance Abuse and Mental Health Data Archive. (2008). Treatment Episode Data Set (TEDS) Series. Accessed August 4, 2008 from the Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services Web site, from http://www.icpsr.umich.edu/SAMHDA/index.html

[27]National Institute on Drug Abuse, National Institutes of Health. (July 2001, Revised August 2005). *Prescription drugs: Abuse and addiction.* NIH Publication Number 05-4881. Retrieved July 30, 2008, from the NIDA Web site from http://www.nida.nih.gov/PDF/RRPrescription.pdf

[28]Information on schedule I through V controlled substances can be found at the U.S. Drug Enforcement Administration's Web site at http://www.usdoj.gov/dea/pubs/csa/812.htm.

[29]Indiana Professional Licensing Agency. (n.d.). *About INSPECT and FAQs.* Retrieved July 14, 2008, from http://www.in.gov/pla/4539.htm.

[30]Bureau of Justice Assistance. (n.d.). *General funding information.* Retrieved July 24, 2008, from http://www.ojp.usdoj.gov/BJA/funding/index.html.

[31]Indiana Professional Licensing Agency. *About INSPECT and FAQs.* Ibid.

[32]Rannazzisi, J.T. (June 24, 2008). *Online Pharmacies and the Problem of Internet Drug Abuse. Testimony before the House Judiciary Committee Subcommittee on Crime, Terrorism, & Homeland Security.* Accessed August 5, 2008 from the U.S. Drug Enforcement Administration Web site from http://www.usdoj.gov/dea/pubs/cngrtest/ct062408.html

[33]Wall, D.S. Indiana State Board of Pharmacy. (Personal e-mail communication, July 15, 2008).

[34]Substance Abuse and Mental Health Data Archive, (2008). Treatment Episode Data Set (TEDS) Series. Accessed August 4, 2008 from the Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services Web site, from http://www.icpsr.umich.edu/SAMHDA/index.html

[35]McCabe, S.E., & Teter, C.J. (2007). Drug use related problems among nonmedical users of prescription stimulants: A web-based survey of college students from a Midwestern university. *Drug and Alcohol Dependence, 91,* 69-76.

[36]Kehlet, H. (1999). Acute pain control and accelerated postoperative surgical recovery. *Surgical Clinics of North America, 79*, 431-443.

[37]Carr, D.B. & Goudas, L.C. (1999). Acute pain. *Lancet, 353*, 2051-2058.

CENTER FOR HEALTH POLICY

Indiana University Center for Health Policy

The Indiana University Center for Health Policy is a nonpartisan applied research organization and part of the Indiana University Public Policy Institute. CHP researchers work on critical public health policy issues and issues that affect the quality of health care delivery and access to health care. The mission of CHP is to collaborate with state and local government and public and private healthcare organizations in policy and program development, program evaluation, and applied research on critical health policy-related issues.

Staff and faculty at CHP do ongoing research on substance abuse in Indiana and its effects. Much of the research for this report was taken from work completed for the Indiana Office of the Governor and the Indiana Division of Mental Health and Addiction and funded by a grant from the U.S. Department of Health and Human Services' Center for Substance Abuse Prevention (CSAP), as part of the Strategic Prevention Framework State Incentive Grant (SPF SIG) Program.

For more information about the Center for Health Policy and access to other reports, visit its Web site at http://www.healthpolicy.iupui.edu/.

CHP and the Indiana University Public Policy Institute are grateful to the Indiana Division of Mental Health and Addiction for funding publication and distribution of this report and other information for leaders and policymakers in Indiana.

Authors: **Eric R. Wright**, PhD, director, Indiana University Center for Health Policy, and professor, School of Public and Environmental Affairs, and chair of the Indiana State Epidemiology and Outcomes Workgroup, and **Marion Greene**, research coordinator, Center for Health Policy. **Editor: Marilyn Michael Yurk**, Indiana University Public Policy Institute.

CENTER FOR HEALTH POLICY

ADDRESS SERVICE REQUESTED

Non Profit
US Postage Paid
Indianapolis, IN
Permit No. 803

334 North Senate Avenue, Suite 300
Indianapolis, IN 46204-1708
www.healthpolicy.iupui.edu

SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS
INDIANA UNIVERSITY
IUPUI

08-C45