



Kentucky

Drug Threat Assessment



National Drug Intelligence Center
and
Kentucky State Police

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Kentucky Drug Threat Assessment

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and
Kentucky State Police

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Preface

This report is a joint strategic assessment between NDIC and the Kentucky State Police that addresses the status and outlook of the drug threat to Kentucky. Analytical judgment determined the threat posed by each drug type or category, taking into account the most current quantitative and qualitative information on availability, demand, production or cultivation, transportation, and distribution, as well as the effects of a particular drug on abusers and society as a whole. While NDIC sought to incorporate the latest available information, a time lag often exists between collection and publication of data, particularly demand-related data sets. NDIC anticipates that this drug threat assessment will be useful to policymakers, law enforcement personnel, and treatment providers at the federal, state, and local levels because it draws upon a broad range of information sources to describe and analyze the drug threat to Kentucky.

Kentucky Drug Threat Assessment

Executive Summary

The production, distribution, and abuse of illicit drugs pose a serious threat to Kentucky. Most illicit drugs are readily available in the state, and the number of drug-related arrests, seizures, and treatment admissions has increased dramatically. The level of methamphetamine production, distribution, abuse, and violence has increased substantially, particularly in the rural areas of the state. Cocaine poses a significant threat to most metropolitan areas of the state because it is abused at high levels, is increasingly available, and its distribution and abuse are frequently associated with violent crime. Marijuana also poses a considerable threat to Kentucky and surrounding states because it is the most prevalent illicit drug, it accounts for more drug-related treatment admissions than any other drug, and a significant amount of the nation's marijuana is produced in the state. Diverted pharmaceuticals, club drugs such as MDMA and GHB, and hallucinogens are increasingly available and abused. The distribution and abuse of heroin pose a low threat to the state.

Methamphetamine is the most rapidly emerging threat to Kentucky, particularly in the rural areas of the state. The level of methamphetamine production, distribution, abuse, and violence has increased dramatically and is spreading across the state from west to east. The number of treatment admissions for methamphetamine abuse in Kentucky increased 42 percent from fiscal year 1998 through fiscal year 2000, more than for any other drug. Mexican criminal groups are the primary transporters and wholesale distributors of Mexico-produced methamphetamine and methamphetamine produced in California and southwestern states. The recent increase of locally produced methamphetamine may have eclipsed the amount of Mexico-produced methamphetamine transported into the state. The number of methamphetamine laboratories seized increased dramatically from 1998 through 2001, exceeding the capacity of local law enforcement agencies to adequately conduct investigations and clean up the hazardous chemicals associated with methamphetamine production. The Birch reduction method, also known as the Nazi method, is the most common methamphetamine production method used in Kentucky. Local independent Caucasian dealers and criminal groups dominate the retail distribution of methamphetamine in the state. Methamphetamine sales usually are prearranged and occur in bars, restaurants, private vehicles, and residences.

Cocaine, both powdered and crack, is increasingly available, frequently abused, and poses the greatest threat to most metropolitan areas in Kentucky. The number of treatment admissions for powdered cocaine in the state fluctuated at high levels from fiscal year 1998 through fiscal year 2000, while the number of admissions for crack increased 31 percent during that period. The distribution and abuse of cocaine are frequently associated with violent crime. Most of the powdered cocaine available in the state is transported from Arizona, California, Florida, Illinois, New York, and Texas by Mexican and African American criminal groups. Caucasian, Mexican, and African American criminal groups are the dominant distributors of wholesale quantities of powdered cocaine in the state. Caucasian criminal groups and local independent dealers are the primary retail distributors of powdered cocaine in Kentucky, and local African American gangs, among others, also distribute retail quantities. Wholesale distribution of crack cocaine rarely occurs in the state. Retail crack cocaine distribution, once dominated by African American distributors, increasingly involves Caucasian distributors as well. Cocaine sales are usually arranged by phone or in person and take place in private residences, bars, and restaurants.

Marijuana is the most widely available and frequently abused illicit drug in Kentucky; it remains the foremost cash crop throughout the state. Growers are increasingly using violence to protect themselves and their crop in the state. Nearly 50 percent of all drug treatment admissions in Kentucky from fiscal year 1998 through fiscal year 2000 were marijuana-related—more than for any other drug—and the number of treatment admissions for marijuana abuse increased 27 percent from fiscal year 1998 through fiscal year 2000. Cannabis is more commonly cultivated outdoors in Kentucky, but the number of indoor cannabis grows is increasing. Kentucky ranked among the top three states in the nation for the number of cannabis plants eradicated each year from 1998 through 2000. In 2000 over 460,000 cannabis plants were eradicated in Kentucky, ranking it third behind California and Hawaii, respectively. Local independent Caucasian producers cultivate most of the marijuana available in the state and are the dominant wholesale distributors of locally produced marijuana. Local independent producers also distribute Mexico-produced marijuana, often using it as filler for their product. Mexican criminal groups—the primary transporters of Mexico-produced marijuana into Kentucky—usually sell wholesale quantities to local independent Caucasian dealers, who are the dominant retail distributors of Mexico-produced marijuana. Local independent Caucasian dealers also are the dominant retail distributors of locally produced marijuana. Retail marijuana sales usually occur in private residences, bars, and restaurants in the state.

Other dangerous drugs, especially diverted pharmaceuticals, club drugs, and hallucinogens, are an increasing threat to Kentucky. Pharmaceutical diversion investigations were once limited to individuals but now include multiperson enterprises. The number of treatment admissions in Kentucky for abuse of oxycodone—mostly OxyContin and Percocet—increased 163 percent from fiscal year 1998 through fiscal year 2000. The increased level of diverted pharmaceutical distribution and abuse has become so significant that the Kentucky Cabinet for Health Services developed computer software to help physicians, pharmacists, and law enforcement authorities identify patterns of abuse. The abuse of hallucinogens such as ketamine, LSD, and psilocybin mushrooms and of club drugs, especially GHB and MDMA, is increasing. Club drugs and hallucinogens are popular at raves and dance clubs where the drugs are readily available and frequently

abused. Peer pressure and cultural myths surrounding the use of club drugs continue to undermine the warnings of healthcare professionals regarding the serious side effects associated with these drugs.

Heroin poses a low threat to Kentucky because it is rarely available or abused in the state. Heroin availability is limited primarily to urban areas, and information regarding the heroin threat in other areas of the state is largely negligible. Most of the heroin available in Kentucky is produced in Mexico. South American heroin, which on average is higher purity than Mexican, is available in at least one area of the state. Local independent Caucasian dealers, the dominant heroin distributors in the state, transport most of the heroin into Kentucky from major cities such as Chicago, Cincinnati, Dayton, Detroit, and New York. Mexican criminal groups also distribute heroin in the state but to an even lesser extent.

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Table of Contents

Executive Summary iii

Overview 1

Methamphetamine 3

Abuse 3

Availability 4

Violence 5

Production 5

Transportation 8

Distribution 8

Cocaine 9

Abuse 9

Availability 10

Violence 10

Production 11

Transportation 11

Distribution 11

Marijuana 12

Abuse 12

Availability 13

Violence 13

Production 14

Transportation 15

Distribution 16

Other Dangerous Drugs 16

Diverted Pharmaceuticals 16

Club Drugs 20

Hallucinogens 23

Heroin 24

Abuse 24

Availability 25

Violence 25

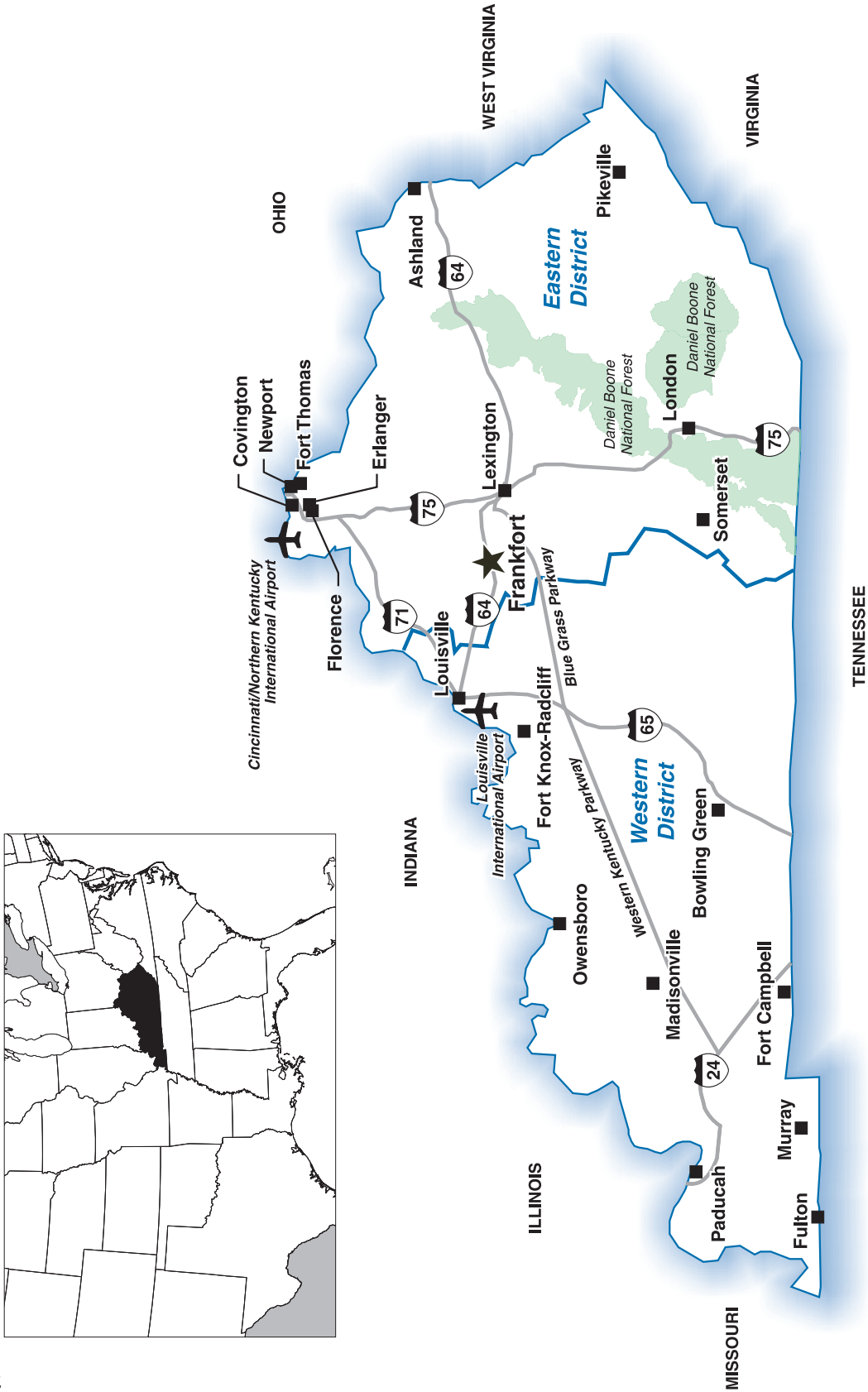
Production 25

Transportation 25

Distribution 26

Outlook 26

Sources 27



Kentucky.

Note: This map displays features mentioned in the report.



Kentucky Drug Threat Assessment

Overview

Kentucky is located in the south central United States along the western side of the Appalachian Mountains and is bordered by seven states. The state ranks twenty-fifth in population with over 4 million residents. More than 35 percent of the residents are concentrated in 9 of Kentucky’s 120 counties, and nearly 52 percent live in urban areas. The Lexington-Louisville-Covington “Golden Triangle,” formed by the intersection of Interstates 64, 71, and 75, consists of 24 counties in north central Kentucky and is home to more than 1.7 million residents. This area, known for its economic prosperity, experienced tremendous population growth during the 1990s. Lexington is the largest city in Kentucky and home to the state’s largest university. The greater Louisville Metropolitan Statistical Area along the Ohio River Valley—sometimes referred to as “Kentuckiana”—includes more than 1 million residents in three Kentucky and four southern Indiana counties. It is in these densely populated areas that most of the drugs in the state are distributed and abused. Covington, in northern Kentucky, is located directly across the Ohio River from the Cincinnati metropolitan area.

Kentucky has an active agricultural and commercial trade office in Mexico. In order to fill unskilled labor shortages, the commonwealth actively recruits Mexican laborers to work on tobacco, vegetable, and horse farms. Since 1980

Fast Facts	
Kentucky	
Population (2000)	4,041,769
U.S. population ranking	25th
Median household income (2000)	\$37,186
Unemployment rate (2000)	4.5%
Land area	39,732 square miles
Capital	Frankfort
Other principal cities	Bowling Green, Covington, Lexington, Louisville, Owensboro
Number of counties	120
Principal industries	Agriculture, apparel, chemicals, fuel resources, industrial machinery, metals, nonfuel minerals, transportation, transportation equipment

the larger Hispanic population in Kentucky has increased 2,000 percent, from approximately 3,000 to 60,000. This increased Hispanic population has made it easier for Mexican criminal

Kentucky Drug Threat Assessment

groups to operate in Kentucky by infiltrating the law-abiding Hispanic population.

Most commercial traffic in Kentucky involves the transit of goods through the state rather than to or from the state. Kentucky's geographic location and its transportation infrastructure allow easy access to and movement of goods into and throughout the Great Lakes and Southeast regions. The state has five interstate highways (I-24, I-64, I-65, I-71, and I-75) and four improved parkways, (the Western Kentucky, Cumberland, William H. Natcher, and Daniel Boone Parkways) among others, which provide excellent connectivity between Kentucky cities and other states. Illicit drugs concealed in shipments of legitimate goods, transported in private and commercial vehicles or shipped via package delivery services, have an excellent chance of reaching their destinations due to the sheer volume of traffic that transits the state daily.

Kentucky is home to two of the world's busiest airfreight hubs located in Louisville and Hebron. Air cargo facilities at these sites process thousands of foreign and domestic inbound and outbound shipments daily. In Kentucky overnight delivery services have expanded as a result of the growth in electronic commerce. In 1999 Louisville was ranked seventh in the nation and twelfth in the world for its volume of air cargo shipments. The Cincinnati/Northern Kentucky International Airport in Hebron ranked twenty-second in the nation and forty-fourth in the world for air cargo shipments. Since 1999 Kentucky and the nation have experienced a dramatic increase in seizures of illicit drugs and money transported via airborne package delivery services.

Drugs destined for distribution in Kentucky are transported primarily to Louisville, Lexington, and Covington, which serve as distribution cities for the state. Louisville is the primary distribution city and is the most important transportation center in Kentucky for licit and illicit goods. Lexington and Covington are secondary distribution cities. Louisville is a significant road, rail, barge, and air transportation center for the central

United States and is a distribution center for commodities destined for the Ohio River Valley. The city is at the crossroads of three interstate highways—Interstates 64, 65, and 71. There are 29 barge terminals along the Ohio River at Louisville. The greater Louisville metropolitan area is serviced by 15 airlines that provide more than 100 nonstop domestic and international flights daily.

A variety of criminal groups and independent dealers distribute illicit drugs at the wholesale and retail levels in Kentucky. No single group appears to dominate drug distribution in Kentucky's urban centers, but Caucasian criminal groups and local independent Caucasian dealers dominate wholesale and retail drug distribution in rural areas of the state.

Street gang activity in Kentucky, particularly in Louisville, Lexington, Fort Knox-Radcliff, and Bowling Green, has decreased significantly since 1996 primarily because of intense law enforcement pressure. Law enforcement agencies across the state have become proactive in pursuing gang-related crime to force gang members underground or out of their jurisdictions. Overall, gang-related violence associated with drug distribution and territorial disputes throughout Kentucky has decreased and, in some cases, disappeared entirely except in the largest cities. The remaining organized gangs have attempted to avoid law enforcement attention by moving drug distribution indoors and avoiding overt confrontations. While some of the street gangs in Kentucky adopt the names of nationally recognized gangs, their affiliations to these gangs are suspect. According to law enforcement authorities in Lexington, some of the gangs in their area have connections to gangs in Detroit. Fort Knox-Radcliff and Bowling Green law enforcement authorities report that young people who have recently moved into the state from Chicago and Detroit brought gang culture and affiliations with them.

Drug-related arrests are at high levels in Kentucky. In fiscal year (FY) 1999 there were more than 45,000 drug-related arrests in the state.

Most arrests were for drug possession, and there were more marijuana-related arrests than for any other illicit drug that year. Possession of drug paraphernalia was the second most frequent charge.

Drug-related treatment admissions and drug-related deaths have increased in Kentucky. There was a 26 percent increase in the number of treatment admissions for drug abuse from FY1998 through FY2000. In FY1998 there were 20,812 drug abuse treatment admissions, 25,225 in FY1999, and 26,270 in FY2000. There were also 604 drug-related deaths in Kentucky from FY1994 through FY1999. The number of drug-related deaths in Kentucky increased from 76 in FY1994 to 153 in FY1999. Ninety-one percent were Caucasian, 68 percent were male, and 21 percent were between ages 35 and 39.

Residents of military installations, which have a huge presence in western Kentucky, are

not exempt from drug abuse. Fort Campbell, located on the Tennessee border, has a combined military, civilian, and dependent population of 65,000. Fort Knox, located on the Indiana border, has a combined military, civilian, and dependent population of 26,000. These numbers account only for the people who are permanently assigned to these installations, not the thousands of active duty and reserve soldiers who are temporarily assigned for training every year. Fort Campbell officials reported that 438 soldiers in 2000 and 423 soldiers in 2001 tested positive for MDMA (3,4-methylenedioxymethamphetamine), GHB (gamma-hydroxybutyrate), LSD (lysergic acid diethylamide), or methamphetamine. Fort Knox authorities reported that 144 soldiers in 2000 and 101 in 2001 tested positive for marijuana, cocaine, methamphetamine, or LSD.

Methamphetamine

Methamphetamine is the most rapidly emerging threat to Kentucky, particularly in the rural areas of the state. The level of methamphetamine production, distribution, abuse, and violence has increased dramatically and is spreading across the state from west to east. The number of treatment admissions for methamphetamine abuse increased 42 percent from fiscal year 1998 through fiscal year 2000, more than for any other drug. Mexican criminal groups are the primary transporters and wholesale distributors of Mexico-produced methamphetamine and methamphetamine produced in California and southwestern states. The recent increase of locally produced methamphetamine may have eclipsed the amount of Mexico-produced

methamphetamine transported into the state. The number of methamphetamine laboratories seized increased dramatically from 1998 through 2001, exceeding the capacity of local law enforcement agencies to adequately conduct investigations and clean up the hazardous chemicals associated with methamphetamine production. The Birch reduction method, also known as the Nazi method, is the most common methamphetamine production method used in Kentucky. Local independent Caucasian dealers and criminal groups dominate the retail distribution of methamphetamine in the state. Methamphetamine sales usually are pre-arranged and occur in bars, restaurants, private vehicles, and residences.

Abuse

Of all treatment admissions for illicit drugs in Kentucky between FY1998 and FY2000, methamphetamine accounted for the largest percentage increase. During that time, treatment admissions for methamphetamine abuse

increased 42 percent overall, from 443 in FY1998 to 631 in FY2000, according to the Kentucky Division of Substance Abuse. Treatment data indicate that methamphetamine abuse is greatest in counties bordering the Ohio River in western

Kentucky Drug Threat Assessment

Kentucky, but abuse appears to be spreading eastward. Data for the first 4 months of FY2001 suggest an increase in the number of treatment admissions for methamphetamine abuse in southern, central, and eastern Kentucky.

Treatment data from FY1998 through FY2000 indicate that 64 percent of all methamphetamine-related treatment admissions were male, 97 percent were Caucasian, 2 percent were African American, and 97 percent were adults over age 19. Most methamphetamine-related treatment admissions were between the ages of 20 and 44, and admissions were divided equally between abusers in urban and rural areas. According to the Kentucky Division of Substance Abuse, although methamphetamine abuse accounted for only 2 percent of treatment admissions for all drugs during this period, state officials believe the number of untreated methamphetamine abusers is substantially greater due to the dramatic increase in the number of laboratories seized in the state.

Availability

The availability of methamphetamine continues to increase in Kentucky, particularly in the northern and western areas of the state that border the Ohio River Valley. The Drug Enforcement Administration (DEA) Detroit Division reports that this increase is attributed not only to a greater quantity of the drug smuggled from Mexico but also to an increase in local production. The DEA Louisville Resident Office reports that methamphetamine is increasingly available throughout its jurisdiction. Daviess County law enforcement officials report that methamphetamine availability, as well as the number of distributors and abusers, is increasing. A narcotics officer for Daviess County reported that 99 percent of his investigations are methamphetamine-related.

Methamphetamine is attracting a new user population in Kentucky. Once regarded as an adult drug, methamphetamine is increasingly popular among adolescents because of the heightened physical and mental effects it produces. Young people at rave parties are using it to increase and prolong their energy levels. Young women are attracted to methamphetamine because of its purported ability to promote weight loss.

Methamphetamine can be taken orally, snorted, smoked, or injected. Data from treatment centers throughout Kentucky from FY1998 through FY2000 identify the following methods of administration: 41 percent ingested methamphetamine orally, 27 percent inhaled it, 16 percent smoked it, and 13 percent injected it. The number of abusers who inhaled or smoked the drug increased during this period, while the number of those who ingested the drug orally decreased slightly.

Methamphetamine price data do not reflect any consistent pattern or trend. According to the DEA Detroit Division, methamphetamine prices in Louisville have increased slightly for gram quantities and decreased significantly for pound quantities. In 1995 a gram of methamphetamine sold for \$100 in Louisville. In 2000 the price ranged from \$100 to \$120 per gram. In Louisville methamphetamine sold for \$13,000 per pound in 1995 and \$6,000 to \$10,000 in 2000. According to a 2000 survey of Kentucky State Police, methamphetamine sold for as little as \$50 per gram and as much as \$200 per gram; the statewide average price was \$106 per gram in 2000.

Violence

Methamphetamine is a synthetic stimulant that affects the central nervous system, and its abusers often exhibit violent tendencies. Symptoms associated with prolonged abuse such as paranoia, auditory and visual hallucinations, or mood disturbances—combined with severe sleep deprivation—can result in unpredictable and uncontrollable behavior. Law enforcement officials in Kentucky report that domestic violence and child abuse may be linked to methamphetamine production and abuse, a relationship that has been documented in other states. According to the Owensboro Police Department, the increase in methamphetamine-related violence in its jurisdiction is directly related to the increase in methamphetamine production.

The physical and psychological effects of methamphetamine abuse are profound. Methamphetamine's stimulant effects can last for hours compared with minutes-long effects of crack cocaine. Often, the methamphetamine abuser remains awake for days, and as the high begins to wear off, the individual enters the tweaking stage and is prone to violence, delusions, and paranoia. Many methamphetamine abusers try to mediate the effects of the methamphetamine "crash" with other drugs such as cocaine or heroin.

Two Men Charged With Attempted Murder

On February 7, 2001, two Logan County men were charged with attempted murder of a Kentucky State Police trooper and production of methamphetamine. While attempting to flee with a mobile methamphetamine laboratory, the men injured two troopers. The troopers had stopped the car and ordered the men to exit the vehicle when the driver suddenly backed up in an attempt to escape and hit one officer who was thrown over the fleeing car. The other trooper fired his firearm at the driver striking him in the right thigh and arm. The suspects were apprehended less than a mile from the scene by another trooper.

Source: Kentucky State Police, Post 2, Madisonville.

Tweaking

During the tweaking stage, the user often has not slept in days and, consequently, is extremely irritable. The "tweaker" also craves more methamphetamine, which results in frustration and contributes to anxiety and restlessness. In this stage, the methamphetamine abuser may become violent without provocation. Case histories indicate that tweakers have become antagonized at the mere sight of a police uniform.

Production

Methamphetamine production in Kentucky is increasing significantly. Methamphetamine laboratory seizures increased dramatically from FY1998 through FY2001 in Kentucky. There were 18 laboratories seized in FY1998, 77 in FY1999, 145 in FY2000, and 262 in FY2001. The DEA London Resident Office reports that although most methamphetamine laboratories are seized in the western part of the state, seizures in

eastern Kentucky are increasing. The recent increase of locally produced methamphetamine may have eclipsed the amount of Mexico-produced methamphetamine transported into the state. According to the Kentucky Administrative Office of the Courts, 410 individuals were charged with methamphetamine production in FY1999. In FY2000 that number more than doubled to 839.

Methamphetamine laboratory operations have increased significantly in the Western Federal Judicial District and are spreading to the Eastern Federal Judicial District. Most of the DEA methamphetamine laboratory seizures have been confined to areas in the Western Federal District of Kentucky, primarily in the DEA Louisville Resident Office and Madisonville Post of Duty areas. From FY1998 through FY2001, there were 422 methamphetamine laboratories seized in the Western Federal Judicial District. In comparison, there were only 80 methamphetamine laboratories seized in the Eastern Federal Judicial District during the same period. Of the 80 methamphetamine laboratories seized in the Eastern Federal Judicial District over this 4-year period, 77 were seized in FY2001.

Table 1. Methamphetamine Laboratory Seizures, Kentucky, FY1998–FY2001

Fiscal Year	Western District Kentucky	Eastern District Kentucky
1998	18	0
1999	76	1
2000	143	2
2001	185	77

Source: DEA; Kentucky State Police; Kentucky Multijurisdictional Drug Task Forces.

Local independent Caucasian producers are responsible for most of the methamphetamine produced within the state. Most law enforcement officials in Kentucky who responded to the National Drug Intelligence Center (NDIC) National Drug Threat Survey 2001 and other professionals indicate that local independent producers—primarily Caucasian males—are the predominant methamphetamine producers in Kentucky. Both the Hardin and Simpson County Sheriff’s Offices report that local independent Caucasians are the predominant methamphetamine producers in their areas.

The Birch reduction method, also known as the Nazi method, is the most common

Methamphetamine Production Methods

Ephedrine/Pseudoephedrine Reduction:

- **Hydriodic acid/red phosphorus.** The principal chemicals are ephedrine or pseudoephedrine, hydriodic acid, and red phosphorus. This method can yield multi-pound quantities of high quality d-methamphetamine and often is associated with Mexican drug trafficking organizations.
- **Iodine/red phosphorus.** The principal chemicals are ephedrine or pseudoephedrine, iodine, and red phosphorus. The required hydriodic acid in this variation of the hydriodic acid/red phosphorus method is produced by the reaction of iodine in water with red phosphorus. This method yields high quality d-methamphetamine. Another iodine/red phosphorus method, limited to small production batches, is called the cold cook method because the chemicals, instead of being heated, are placed in a hot environment such as the sun.
- **Birch.** The principal chemicals are ephedrine or pseudoephedrine, anhydrous ammonia, and sodium or lithium metal. Also known as the Nazi method, this method typically yields ounce quantities of high quality d-methamphetamine and often is used by independent dealers and producers.

Phenyl-2-propanone:

- **P2P.** The principal chemicals are phenyl-2-propanone, aluminum, methyamine, and mercuric acid. This method yields lower quality dl-methamphetamine and has been associated with outlaw motorcycle gangs.

methamphetamine production method used in Kentucky. Most law enforcement officials in western Kentucky who were contacted indicated that the Birch reduction method is predominant throughout their areas. Most seizures were of small laboratories located primarily in rural areas and capable of producing ounce or smaller quan-

ties per cook. The Birch reduction method does not require extensive knowledge of chemistry or sophisticated laboratory equipment and is faster than the iodine/red phosphorus method. Small quantities of methamphetamine, usually a pound or less with a purity level of 90 percent, can be produced in less than an hour using the Birch reduction method. Mobility is another reason for the method's popularity. Laboratory operators using the Birch reduction method can pack the necessary chemicals and equipment in a box and assemble a laboratory anywhere. Common production sites are in the trunks of cars, in pickup truck beds, in apartments or motel rooms, and at outdoor locations such as deserted roads or campgrounds. The mobility of these "box laboratories" makes detection very difficult.

In the Eastern Federal Judicial District where agriculture is limited, approximately half of the laboratories seized during FY2001 used the iodine/red phosphorus method. This was attributed to the limited availability of anhydrous ammonia—an agricultural chemical which is also a principal chemical used in the Birch reduction method—in the eastern portions of the state.

Methamphetamine laboratory operators using the Birch reduction method generally steal anhydrous ammonia to produce methamphetamine. They usually transfer the ammonia to propane tanks for transport. Propane tanks are not designed to store anhydrous ammonia and can explode if the ammonia corrodes the tank valve or if the outside temperature rises causing the pressure inside the tank to build. Deteriorated tank valves are a frequent hazard because the valve may leak or break causing the hazardous gas to be released. The valves on propane tanks used to store anhydrous ammonia turn a bluish color that is easily identifiable. Law enforcement officers who discover propane tanks with this distinct discoloration should proceed with extreme caution and contact the nearest methamphetamine laboratory disposal unit. Exposure to anhydrous ammonia can cause blindness and severe burns to the skin, throat, and lungs.

Farmers typically store anhydrous ammonia in large tanks in fields. The increased number of thefts of anhydrous ammonia indicates the growing use of the Birch reduction method. Thieves remove locks from these tanks with bolt cutters and use garden or vacuum hoses to siphon the ammonia from the tanks. Because tanks may hold as much as 100,000 gallons and a theft may involve as little as 1 or 2 gallons, the theft may go undetected. Hoses attached to the larger tanks, depending on the size and length of the hose, may contain a sufficient amount of ammonia for limited production of methamphetamine. Production may take place near the tank site, and the waste from the production process may be the only sign that a theft occurred. Tanks that are placed in well-lit areas may be less vulnerable, but extra lighting does not always guarantee theft prevention.

Danger of Anhydrous Ammonia

Anhydrous ammonia misuse is dangerous to the public, law enforcement officers, and laboratory operators. In September 2001 an anhydrous ammonia leak produced an ammonia cloud that forced authorities in Daviess County to evacuate homes and buildings within a half-mile of a farm supply store for over 3 hours in the middle of the night. The ammonia leak forced authorities to shut down a western Kentucky highway, caused a series of traffic accidents, and sent seven people for treatment at a hospital in nearby Owensboro. The leak of approximately 1,000 gallons of ammonia was the result of a botched theft. It occurred when a hose used to transfer ammonia from a 1,000-gallon tank into a portable container dislodged. Also in Daviess County, five people were injured in April 1999 when a canister of anhydrous ammonia exploded in a cooler inside a car. One of the passengers received severe burns to his body and was hospitalized. Authorities believe the ammonia had been stolen from a farm supply company.

The methamphetamine production process typically yields 5 to 7 pounds of hazardous waste for each pound of finished product. Discarded chemicals have been discovered in public parks,

Kentucky Drug Threat Assessment

near schools, and in commercial trash receptacles. The chemical waste at these dumpsites presents explosion, fire, and health risks, as well as environmental hazards that may persist for decades. The toxic by-products of methamphetamine production can damage the environment, including the soil, water supplies, and even sewage systems. Local authorities do not have the technical or financial resources to investigate and remediate these toxic sites. Whether dumped directly onto the ground or placed in containers

that will eventually corrode and leak, toxic waste can make the soil barren and poison local water sources. Water supplies in rural areas may be at greater risk than urban water supplies. Rural areas usually have no system in place to monitor water supplies for contamination, which may result in farmers unknowingly using contaminated water to irrigate crops and water livestock. Urban areas, despite having sophisticated, centralized water management systems that undergo systematic testing and treatment, are also vulnerable.

Transportation

Mexican criminal groups are the primary transporters of methamphetamine produced in Mexico, California, and southwestern states. The drug is transported into Kentucky from Mexico through California and southwestern states and from Chicago, Illinois. The methamphetamine normally is transported in 1- to 3-pound quantities to urban areas of Kentucky, such as Covington, Lexington, and Louisville, using commercial and private vehicles. Nearly all of this methamphetamine remains in these urban areas, although some may be transported to outlying areas for distribution. It is sold to Caucasian males who are local independent dealers or members of a criminal group.

Local independent Caucasian distributors are the dominant transporters of locally produced methamphetamine. The drug is generally consumed close to where it is produced and is transported via private vehicles from the laboratory site for distribution. Frequently, the laboratory

operator is also the local retail distributor. The Owensboro and Bowling Green Police Departments have both reported that local independent dealers are the dominant transporters of locally produced methamphetamine in their areas.

Kentucky's rural environment and improved road network provide many opportunities for laboratory operators to transport methamphetamine. Interstate 64 transects the mountains of eastern Kentucky, and I-24 extends through the rural hills of western Kentucky. Most of the state's interstate highways, together with the Western Kentucky, Cumberland, and Daniel Boone Parkways, provide convenient access between secluded wilderness and rural laboratory locations and urban and suburban precursor supply locations. Of Kentucky's 120 counties, 95 are rural with fewer than 100 people per square mile. Remote areas between towns and cities are expanses of remote areas that provide low risk of detection for laboratory operators.

Distribution

Mexican criminal groups are the primary wholesale distributors of Mexico-produced methamphetamine and methamphetamine produced in California and southwestern states. These criminal groups sell the methamphetamine in urban areas primarily to Caucasian criminal groups and local independent Caucasian dealers—the dominant retail distributors of Mexico-produced, locally

produced, and southwestern U.S.-produced methamphetamine in Kentucky. Some Mexican criminal groups are also beginning to distribute methamphetamine at the retail level. Caucasian distributors may sell all of the methamphetamine to friends and associates, they may keep a portion of the product for personal use and then distribute the rest, or they may divide the amount purchased

into smaller quantities and sell it to other Caucasian retail distributors.

Locally produced methamphetamine, typically produced in small quantities, normally is not sold at the wholesale level in Kentucky. Retail distribution usually involves a small group of

Caucasian dealers who produce the drug. This group comprises the laboratory operator and the individuals buying and stealing the precursor chemicals needed for production. Retail sales normally are prearranged and occur in bars, restaurants, private vehicles, and residences.

Cocaine

Cocaine, both powdered and crack, is increasingly available, frequently abused, and poses the greatest threat to most metropolitan areas in Kentucky. The number of treatment admissions for powdered cocaine in the state fluctuated at high levels from fiscal year 1998 through fiscal year 2000, while the number of admissions for crack increased 31 percent during that period. The distribution and abuse of cocaine are frequently associated with violent crime. Most of the powdered cocaine available in the state is transported from Arizona, California, Florida, Illinois, New York, and Texas by Mexican and African American criminal groups. Caucasian, Mexican, and African

American criminal groups are the dominant distributors of wholesale quantities of powdered cocaine in the state. Caucasian criminal groups and local independent dealers are the primary retail distributors of powdered cocaine in Kentucky, and local African American gangs, among others, also distribute retail quantities. Wholesale distribution of crack cocaine rarely occurs in the state. Retail crack cocaine distribution, once dominated by African American distributors, increasingly involves Caucasian distributors as well. Cocaine sales are usually arranged by phone or in person and take place in private residences, bars, and restaurants.

Abuse

Cocaine is frequently abused particularly in metropolitan areas, but it also is abused in rural areas of the state. The abuse of crack cocaine remains a problem in urban areas and is becoming increasingly popular in suburban and rural areas.

According to the Kentucky Division of Substance Abuse, treatment admissions for powdered cocaine abuse were at high levels from FY1998 through FY2000, accounting for 16 percent of all drug-related treatment admissions in Kentucky during that time. There were 3,559 powdered cocaine treatment admissions in FY1998, 4,481 in FY1999, and 3,639 in FY2000. Powdered cocaine is abused in the state primarily by middle-class Caucasians.

Crack cocaine treatment admissions increased 31 percent from FY1998 through FY2000. There

were 2,238 crack cocaine treatment admissions in FY1998, 2,833 in FY1999, and 2,942 in FY2000. Crack abuse accounted for 10 percent of all drug-related treatment admissions in Kentucky from FY1998 through FY2000. Seventy-seven percent of the patients admitted for crack cocaine abuse were Caucasian, and 60 percent were male. Crack cocaine is abused primarily by lower-income Caucasians.

In Louisville the number of deaths in which cocaine was a factor decreased from 32 in 1997 to 19 in 1999, then increased to 27 in 2000, according to Drug Abuse Warning Network (DAWN) mortality data.

According to the Youth Risk Behavior Survey (YRBS), 8.8 percent of Kentucky high school students who responded to the survey in

Kentucky Drug Threat Assessment

1999 reported that they had used cocaine at least once in their lifetime; 4.1 percent reported that

they had used cocaine in the 30 days preceding the survey.

Availability

Availability of powdered and crack cocaine is increasing throughout the state. The U.S. Attorney for the Western District of Kentucky, the Kentucky Justice Cabinet, and the Kentucky Criminal Justice Council report an increase in powdered cocaine availability. In 1998 the Federal-wide Drug Seizure System (FDSS) reported 38.7 kilograms of powdered cocaine seized in Kentucky; in 1999 the amount increased to 59.8 kilograms. Seizures remained high in 2000, with 53.9 kilograms, and preliminary reporting indicates that 50.7 kilograms were seized in 2001. Multikilogram quantities of powdered cocaine are available throughout the state. Authorities in rural and urban areas of western Kentucky report steady increases in crack cocaine availability. In urban areas such as Lexington and Louisville, powdered cocaine is available in ounce to

kilogram quantities, and crack cocaine is available in ounce to pound quantities.

Powdered cocaine prices have decreased since 1995, although purity levels have stabilized, indicating a steady supply of cocaine. The DEA Detroit Division reports that in Louisville in 1995, a kilogram of powdered cocaine sold for \$25,000 to \$30,000 compared with \$18,000 to \$24,000 in 2000. Similar decreases occurred in Lexington during the same period. According to a survey of Kentucky State Police jurisdictions, powdered cocaine sold for \$50 to \$150 per gram in 2000. DEA's System to Retrieve Information from Drug Evidence (STRIDE) indicates that from 1997 through 2000, powdered cocaine purity levels ranged from 57 to 63 percent.

Violence

The distribution and abuse of cocaine are frequently associated with violent crime. Increases in the level of violent crime correlate with increases in the availability of crack cocaine in Kentucky. Law enforcement officials in Louisville, Owensboro, Bowling Green, Lexington, and Covington reported increases in the number of assaults, robberies, and homicides correlating

with increases in cocaine distribution in their cities. In 1999 Louisville's murder rate was the forty-sixth highest among cities in the United States, and the murder rate in Lexington was the ninety-second highest—both of these rates were higher than the murder rate in New York City, and many of the murders were related to the distribution of cocaine.

Production

Coca is not cultivated nor is cocaine produced in Kentucky. Powdered cocaine usually is converted to crack by retail distributors, although law enforcement authorities in Kentucky indicate that

abusers are increasingly purchasing powdered cocaine and converting it to crack themselves as dealers attempt to avoid the stricter penalties associated with distributing crack cocaine.

Transportation

Most of the powdered cocaine available in the state is transported from Arizona, California, Florida, Illinois, New York, and Texas. In Louisville most of the powdered cocaine is transported from California, Illinois, New York, and Texas by Mexican and African American criminal groups. Lexington authorities report that cocaine often is transported into their jurisdiction by Mexican and African American criminal groups from Chicago and Mexican criminal groups from Arizona, Texas, and California. Additionally, multikilogram quantities of powdered cocaine have been transported to Lexington since 1996. In 2000 law enforcement officials in Lexington made three large seizures of 6, 12, and 13 kilograms of powdered cocaine that were being transported into the area.

Many modes and conveyances are used to transport powdered cocaine into and through Kentucky. The Appalachia High Intensity Drug Trafficking Area (HIDTA) reports that private and commercial vehicles, small trucks, recreational vehicles with hidden compartments, and package delivery services are commonly used. Overland transporters typically use I-64, I-65, and I-71 to transport cocaine into and through Kentucky. Louisville, one of the world's busiest airfreight

package delivery hubs, is a major transit point for illicit drugs including cocaine destined for other parts of the nation. Law enforcement reports indicate a significant increase in the number of seizures of packages (most of which were destined for other states) containing cocaine shipped via package delivery services. Some of the advantages of transporting cocaine and other drugs using overnight delivery services include real-time parcel tracking and on-time delivery with minimal human involvement.

Couriers occasionally use commercial aircraft, passenger trains, and buses. Couriers now use commercial aircraft less frequently than other transportation methods possibly due to increased security and improved interdiction methods at airports. Couriers occasionally transport drugs via passenger trains, which connect Chicago with Louisville and Fulton and the U.S. eastern seaboard with Ashland in eastern Kentucky. Couriers also use buses to and from neighboring states.

Crack cocaine is not normally transported in large quantities in Kentucky because greater mandatory minimum sentences are imposed for possession of crack than for possession of powdered cocaine.

Distribution

Caucasian, Mexican, and African American criminal groups distribute wholesale quantities of powdered cocaine in the state. However, no single group appears to dominate wholesale distribu-

tion. According to Louisville Metropolitan Police officials, Mexican criminal groups are the primary wholesale powdered cocaine distributors in their jurisdiction. Mexican and criminal groups

Kentucky Drug Threat Assessment

distribute wholesale quantities of powdered cocaine in rural Kentucky.

Caucasian criminal groups and local independent dealers are the primary retail distributors of powdered cocaine in Kentucky, and local African American gangs, among others, also distribute retail quantities. Most retail distribution of powdered cocaine occurs in the urban areas of Kentucky. Cocaine sales usually are arranged by phone or in person and take place in private residences, bars, and restaurants.

Wholesale distribution of crack cocaine in Kentucky is very limited due to the mandatory minimum sentences imposed for possession or distribution of crack. However, when wholesale quantities are sold, they are usually sold in urban areas of Kentucky. Retail crack cocaine distribution, once limited to African American distributors, increasingly involves Caucasian distributors. To avoid law enforcement detection, retail crack cocaine distributors are now much more security conscious. They conduct most transactions in private residences and prearranged locations rather than in public.

Marijuana

Marijuana is the most widely available and frequently abused illicit drug in Kentucky; it remains the foremost cash crop throughout the state. Growers are increasingly using violence to protect themselves and their crop in the state. Nearly 50 percent of all drug treatment admissions in Kentucky from fiscal year 1998 through fiscal year 2000 were marijuana-related—more than for any other drug—and the number of treatment admissions for marijuana abuse increased 27 percent from fiscal year 1998 through fiscal year 2000. Cannabis is more commonly cultivated outdoors in Kentucky, but the number of indoor cannabis grows is increasing. Kentucky ranked among the top three states in the nation for the number of cannabis plants eradicated each year from 1998 through 2000. In 2000 over 460,000 cannabis plants were eradicated in

Kentucky, ranking it third behind California and Hawaii, respectively. Local independent Caucasian producers cultivate most of the marijuana available in the state and are the dominant wholesale distributors of locally produced marijuana. Local independent producers also distribute Mexico-produced marijuana, often using it as filler for their product. Mexican criminal groups—the primary transporters of Mexico-produced marijuana into Kentucky—usually sell wholesale quantities to local independent Caucasian dealers, who are the dominant retail distributors of Mexico-produced marijuana. Local independent Caucasian dealers also are the dominant retail distributors of locally produced marijuana. Retail marijuana sales usually occur in private residences, bars, and restaurants in the state.

Abuse

Marijuana is the most frequently abused illicit drug in Kentucky, and treatment admissions for marijuana abuse are increasing. According to the Kentucky Division of Substance Abuse, nearly 50 percent of all admissions to publicly funded treatment facilities in Kentucky from FY1998 through FY2000 were marijuana-related—more than for

any other drug. Treatment admissions in the state for marijuana abuse increased 27 percent, from 9,879 in FY1998 to 12,584 in FY2000.

In Kentucky marijuana often is used in combination with alcohol or other drugs. There are significant numbers of marijuana abusers in all

urban centers, particularly in the counties of western and northeastern Kentucky.

Marijuana abuse is prevalent among Kentucky high school students. Treatment admissions for marijuana abuse for 15 to 19 year olds increased 25 percent, from 1,493 admissions in FY1998 to

1,862 in FY2000. According to YRBS data, 46 percent of Kentucky high school students who responded to the survey in 1999 reported that they had used marijuana at least once in their lifetime; 24 percent reported that they had used marijuana in the 30 days preceding the survey.

Availability

Marijuana is the most widely available illicit drug in Kentucky. All DEA resident offices in Kentucky report that marijuana availability is widespread. The number of cannabis plants eradicated in Kentucky is indicative of the prevalence of marijuana in the state. Several hundred thousand cannabis plants are eradicated indoors and outdoors each year in the state, ranking Kentucky as one of the largest producers of marijuana in the nation. DEA's Domestic Cannabis Eradication/Suppression Program (DCE/SP) operations resulted in the eradication of 342,093 plants during 1998, 526,388 plants during 1999, and 466,933 plants during 2000. Maintenance issues with helicopters used in cannabis eradication initiatives have resulted in a decrease in flight hours, cited as the cause for the decrease in the number of plants eradicated during 2000.

Kentucky's cannabis growing season influences marijuana availability in the state and throughout the region. Weather conditions have a significant impact on the outdoor cannabis harvest.

Planting generally occurs in April, and plants are harvested in September or October after the first heavy frosts. Locally produced marijuana generally is available after the harvest and through the winter months. Mexico-produced marijuana is used as filler for the higher-grade marijuana produced locally and as a supplement for locally produced marijuana after the previous season's supply has been exhausted.

Marijuana prices throughout most of Kentucky are stable; however, marijuana prices in Louisville have decreased slightly. In Louisville a pound of marijuana sold for \$1,800 to \$2,400 in 1995 and for \$1,800 in 2000. According to a survey of Kentucky State Police, the price of marijuana varies from \$3 per gram in rural communities to \$12 per gram in metropolitan areas. The statewide average price is \$5 per gram. Although prices for each type of marijuana were not specified, law enforcement officers report that locally produced marijuana typically commands a higher price than Mexico-produced marijuana.

Violence

The production of marijuana is increasingly associated with violence. Growers in Kentucky are known to protect themselves and their crops with firearms, explosives, and booby traps, posing a greater threat to law enforcement and the public. Marijuana growers operating on federal land in Kentucky have verbally and physically assaulted visitors to national forests. The U.S.

Forest Service advises that booby-trapped cannabis cultivation sites may endanger visitors. The use of weapons and explosives has resulted in a rise in related crimes such as assaults, illegal possession of firearms, and murders. The number of weapons seized during cannabis eradication program operations nationwide has more than doubled over the past decade.

Production

Large quantities of cannabis are cultivated in Kentucky. The largest areas of cultivation are in the central and eastern parts of the state with sporadic cultivation in western Kentucky. Most cannabis is cultivated on large, isolated parcels of land throughout the rural, mountainous areas, making these plots inaccessible by any means other than by foot, four wheel drive, or aircraft.

Kentucky is a significant producer of marijuana for the region and the nation. Kentucky continually ranked among the top three states for the number of cannabis plants eradicated from 1998 through 2000. Over 460,000 cannabis plants were eradicated in Kentucky in 2000, ranking it third behind California and Hawaii. More than 40 percent of the cannabis plants grown in the United States—an estimated 1.6 million outdoor plants—are cultivated in the Appalachia region. From 1990 through 2000, the Daniel Boone National Forest, located in eastern Kentucky, has led all national forests for the number of cannabis plants eradicated. In 1999, 38 percent (184,000 plants) of all cannabis eradicated on national forest land was taken from the Daniel Boone National Forest.

Eradication Efforts Successful

Kentucky is one of five states that produces 90 percent of the nation’s domestically produced marijuana, and it is a leading producer state in the nation’s southeastern “marijuana belt.” DCE/SP operations were considered successful in 2000. Its efforts resulted in the arrest of 357 individuals and the seizure of 122 weapons and \$507,607 in assets. In 2000 Kentucky eradicated 466,933 cannabis plants from 8,415 outdoor plots and 66 indoor plots.

Source: Domestic Cannabis Eradication/Suppression Program.

Cannabis is more commonly cultivated outdoors in Kentucky, but the number of indoor cannabis grows, including sophisticated hydroponic

operations, is increasing. According to 1998 DCE/SP statistics, California, Florida, Oregon, Alaska, and Kentucky are the five leading states for indoor cannabis eradication. All Kentucky DEA offices indicate that indoor cannabis cultivation operations occur throughout their jurisdictions, and there have been considerable increases in sophisticated hydroponic cannabis grow operations since 1995. According to the Appalachia HIDTA, investigators in Kentucky are discovering more growers who begin the cultivation process indoors. Often, plants are started as clones to ensure growth of a female plant with high levels of THC (tetrahydrocannabinol). After 1 month the plants are sufficiently mature to transplant outdoors. This process increases cannabis production since it provides the opportunity to grow two outdoor crops per year. The Bowling Green, Covington, Lexington, and Owensboro Police Departments report that indoor, outdoor, and hydroponic cultivation occur throughout their areas.

Growing Cannabis Indoors

Growing cannabis indoors requires growth media, light, heat, humidity, and nutrient solution. Plants or seeds are placed into various types of growth media. The medium supports the plant and its roots. Indoor growers cultivate cannabis organically or hydroponically. The organic method uses natural media such as topsoil. Growing operations that use topsoil typically are less sophisticated and require less maintenance than hydroponic operations. In a hydroponic operation, cannabis is not grown in soil; instead, growers use an inert growing medium to support the plant and its root system. Some popular media include rock wool, vermiculite, perlite, and clay pellets.

Local independent Caucasian producers control cannabis cultivation throughout Kentucky. Law enforcement agencies responding to the NDIC National Drug Threat Survey 2001

reported that local independent producers dominate cultivation in their jurisdictions. Most producers are Caucasian males, and most operate independently or in small groups. Often, groups

cultivating cannabis consist of family members with each member having a specific role. Cannabis cultivators represent a broad age range of individuals, from teenagers to senior citizens.

Transportation

Mexican criminal groups are the primary transporters of Mexico-produced marijuana into Kentucky, which they usually transport through California and southwestern states. Specific information documenting the extent of Mexican criminal groups transporting marijuana into Kentucky is largely anecdotal. However, several federal, state, and major metropolitan police investigations have documented the involvement of these groups in the transportation of marijuana into the state. The Bowling Green Drug Task Force and the Owensboro Police Department reported that Mexican criminal groups are responsible for transporting Mexico-produced marijuana into their jurisdictions from California and southwestern states. The Northern Kentucky Drug Strike Force reported that all of the marijuana seized in its jurisdiction is Mexico-produced and is transported from the Tucson, Arizona, area.

Law enforcement officials have reported that Mexico-produced marijuana is transported across the U.S.–Mexico border, then north to I-40 and I-70. Law enforcement agencies in Utah and Oklahoma have intercepted marijuana in large quantities destined for Kentucky and eastern states. For example, the Utah State Police seized 136 kilograms of marijuana from an individual traveling northbound on U.S. Highway 191 in Utah. The individual was en route to Somerset, Kentucky, from Tucson, Arizona. The marijuana was found in the trunk of the vehicle. A task force detective from eastern Kentucky reported that most of the marijuana transported into Kentucky comes through Texas, Arizona, and Tennessee.

He also indicated that transporters formerly used large, older automobiles to transport marijuana into the area but now use compact cars. The Bowling Green Drug Task Force and the Owensboro Police Department reported that Mexican criminal groups use private vehicles and tractor-trailers to transport the drug into their areas.

Marijuana also is transported through Kentucky in airline cargo. In July 2000 a Louisville task force seized 7.3 kilograms of marijuana from a package delivery shipment. The package, destined for Aiken, South Carolina, had been shipped from Lawndale, California, through Louisville, Kentucky, where it was seized. A second package containing 14.1 kilograms of marijuana was shipped from Las Vegas, Nevada, to Boston, Massachusetts, through Louisville. The packages were heavily taped, addressed by hand, and shipped overnight from an unattended commercial package dropoff box. The marijuana was believed to be Mexico-produced, although its source could not be confirmed.

Local Caucasian criminal groups are the primary transporters of locally produced marijuana within the state and throughout the region. Cannabis grown in Kentucky reportedly is transported to the Midwest and East Coast in shipments averaging less than 20 pounds. Destinations include Illinois, Indiana, Michigan, Ohio, and Pennsylvania.

Distribution

Local independent Caucasians cultivate marijuana in the state and are the primary wholesale distributors of locally produced marijuana in Kentucky. The Bowling Green, Covington, and Lexington Police Departments report that local independent dealers who likely produce the drug sell wholesale quantities of marijuana in their jurisdictions. In addition, the Covington Police Department reports that African American criminal groups also distribute marijuana at the wholesale level in its jurisdiction. Caucasian local independent dealers also distribute some Mexico-produced marijuana often using it as filler for their product.

The same Mexican criminal groups that transport Mexico-produced marijuana into Kentucky distribute it at the wholesale level. These groups usually sell the marijuana to local Caucasian independent dealers who are the dominant retail distributors of Mexico-produced marijuana.

Local Caucasian independent dealers and, to a lesser extent, local gangs distribute both Mexico-produced and locally produced marijuana at the retail level in Kentucky. Most law enforcement agencies report that local Caucasian independent distributors between the ages of 20 and 30 are the primary marijuana retail distributors in the state. Although more than half of the law enforcement agencies responding to the NDIC National Gang Survey 2000 indicated that local gangs distribute marijuana at the retail level, these local gangs appear to be secondary to local independent dealers as retail marijuana distributors. The Bowling Green, Covington, Lexington, and Owensboro Police Departments all report that local independent dealers dominate retail distribution in their jurisdictions. These dealers are often Caucasian males, according to a drug task force detective. Retail marijuana sales generally occur in private residences, bars, and restaurants in the state.

Other Dangerous Drugs

Other dangerous drugs, especially diverted pharmaceuticals, club drugs, and hallucinogens, are an increasing threat to Kentucky. Pharmaceutical diversion investigations were once limited to individuals but now include multiperson enterprises. The number of treatment admissions in Kentucky for abuse of oxycodone—mostly OxyContin and Percocet—increased 163 percent from fiscal year 1998 through fiscal year 2000. The increased level of diverted pharmaceutical distribution and abuse has become so significant that the Kentucky Cabinet for Health Services developed computer

software to help physicians, pharmacists, and law enforcement authorities identify patterns of abuse. The abuse of hallucinogens such as ketamine, LSD, and psilocybin mushrooms and of club drugs, especially GHB and MDMA, is increasing. Club drugs and hallucinogens are popular at raves and dance clubs where the drugs are readily available and frequently abused. Peer pressure and cultural myths surrounding the use of club drugs continue to undermine the warnings of healthcare professionals regarding the serious side effects associated with these drugs.

Diverted Pharmaceuticals

The diversion of prescription painkillers is recognized by law enforcement agencies throughout Kentucky as an increasing threat,

especially in eastern portions of the state. While the scope of diversion investigations was once limited to individual abusers, targets now include

multiperson enterprises. Pharmaceutical diversion now involves huge profits and large quantities of drugs being siphoned from legitimate sources. The number of diverted pharmaceuticals has become so significant that the Kentucky Cabinet for Health Services developed computer software to identify potential abuse patterns.

The abuse of pharmaceuticals is a significant problem in Kentucky. In eastern areas of the state, the abuse of pharmaceuticals, particularly OxyContin, has reached alarming levels. While most pharmaceuticals are ingested orally, some users inject drugs such as methadone, OxyContin, and Dilaudid exposing themselves to the risks associated with intravenous drug use.

From FY1998 through FY2000, treatment for the abuse of prescription drugs accounted for 20 percent of all treatment admissions in the state. Male abusers of pharmaceuticals outnumber female abusers four to one in Kentucky. The state ranks third in the nation for per capita consumption of hydrocodone and codeine products. According to the Kentucky Division of Substance Abuse, the most widely abused prescription drug categories during FY2000 (in order of prevalence) were alprazolam (Xanax), oxycodone (OxyContin), diazepam (Valium), hydromorphone hydrochloride (Dilaudid), methadone hydrochloride (methadone), codeine phosphate/sulfate (codeine), and amphetamine sulfate (amphetamine).

Prescription drugs are diverted by a number of means such as prescription forgeries, pharmacy burglaries, armed robberies, employee theft, and doctor shopping—a practice in which a patient visits multiple physicians to acquire numerous prescriptions. Diverted pharmaceuticals are transported into Kentucky by couriers, in private vehicles, or via package delivery services. Most pharmaceutical diversion involves a collection of individuals rather than organized groups working in concert. In Louisville in February 2000, undercover agents purchased more than 8,100 morphine, Dilaudid, and methadone tablets sold by an Ohio pharmacy employee. The diverted tablets had an estimated street value of

\$25 to \$75 per dosage unit. In May 2001 a federal grand jury in Lexington indicted seven people on charges that they used home computers to forge prescriptions for OxyContin. The individuals scanned a legitimate prescription into a computer, altered it, and printed the copy on an ink jet printer. The individuals passed more than 30 forged prescriptions, and police estimate that more than 2,000 OxyContin tablets were obtained for use and distribution using this method. In February 2000 an eastern Kentucky police chief was arrested for acting as a lookout in pharmacy burglaries in which hydrocodone and diazepam were specifically targeted.

In the eastern coal mining counties of Kentucky, the large-scale diversion and abuse of painkillers are particular problems. In the past coal miners spent hours each day crouched in narrow mine shafts. Painkillers were dispensed by coal mine camp doctors in an attempt to keep the miners working. Self-medicating became a way of life for miners, and this practice often led to abuse and addiction among individuals who would have been disinclined to abuse traditional illicit drugs.

Legislative efforts have also been made to monitor the diversion of prescription drugs in Kentucky. In 1998 Kentucky passed legislation that requires the use of prescription paper with security features for all controlled substances. The legislation also includes the monitoring of veterinary prescriptions. This safeguard, which has proven to be effective in decreasing written forgeries, has precipitated an increase in attempted fraudulent prescriptions phoned in to pharmacies. Physicians with questionable prescribing habits in Kentucky's interstate border locations have advised patients to fill their prescriptions in neighboring states to avoid detection.

Over the years the retail sale of diverted pharmaceuticals has progressed from individual addicts concerned only with their daily supplies to individuals working together to sell large quantities on the street, from vehicles, or from private residences. Some individuals recruit known or potential patients and use several vehicles to transport the patients to several doctors in many

Prescriptions Tracked by Electronic Monitoring System

As of January 1, 1999, all prescriptions in Kentucky are tracked by a statewide electronic monitoring system database known as the Kentucky All-Schedule Prescription Electronic Reporting system (KASPER). Physicians are beginning to make routine use of KASPER in an effort to discourage doctor shopping. The system allows physicians to query the database by sending a request prior to the patient's arrival or while the patient is in the office. Within a few hours, the physician receives a facsimile report concerning the individual's controlled substance prescriptions and the doctors the patient has visited. Approximately 100 requests are processed daily, most from practitioners attempting to verify the authenticity of patients' complaints and requests. Kentucky State Police officials believe that the success of KASPER may be fueling prescription fraud in communities of neighboring states that do not employ such monitoring; this, in turn, leads to drugs such as OxyContin being smuggled into Kentucky.

Source: *Associated Press*, 26 February 2001.

communities in a single day or week to conduct large-scale doctor shopping sprees. It is not uncommon for spouses or domestic partners to work together to commit prescription fraud and to sell the drugs.

There are some reports that suggest a connection between cannabis cultivation and the financing of pharmaceutical diversion. Law enforcement reports indicate that individuals in eastern Kentucky are using proceeds from marijuana sales to purchase large quantities of diverted pharmaceuticals.

Alprazolam, also known commercially as Xanax, is a benzodiazepine-type depressant used as an antianxiety tranquilizer. Benzodiazepines were first marketed in the 1960s as antianxiety medications and initially were believed to have fewer adverse side effects than other depressants such as barbiturates. Benzodiazepines affect the central nervous system, have potent hypnotic and sedative qualities, and often are abused in

combination with alcohol, heroin, or cocaine to alter the side effects associated with narcotic withdrawal or overstimulation. According to the Kentucky Division of Substance Abuse, Xanax was the most widely abused prescription drug during FY2000. According to a survey of Kentucky State Police jurisdictions, the statewide average price for alprazolam was \$2 per tablet in 2000.

Another form of benzodiazepine popular in Kentucky is diazepam, also known commercially as Valium. It is a depressant with effects that are long-lasting. Both alprazolam and diazepam have ranked among the top four drugs for pharmaceutical drug abuse treatment in Kentucky since 1997. Nationally, approximately 50 percent of individuals entering treatment for narcotic or cocaine addiction also report abusing benzodiazepines.

Oxycodone, an opiate agonist, is known commercially as OxyContin, Percocet, Percodan, and Tylox. Opiate agonists provide pain relief by acting on opioid receptors in the spinal cord and brain. Opioids are synthetic drugs that act like morphine and are the most effective pain relievers available. Oxycodone is manufactured by modifying thebaine, an alkaloid found in opium. Oxycodone is prescribed for moderate to severe pain associated with injuries, bursitis, dislocations, fractures, neuralgia, arthritis, back ailments, and cancer. It also is used postoperatively and for pain relief after childbirth.

Oxycodone-related deaths in Kentucky have increased significantly since 1998. From January 2000 through May 2001, the Kentucky State Medical Examiner's Office identified the presence of oxycodone in 69 deaths; the oxycodone levels were toxic in 36 of those deaths. OxyContin is one of the most abused oxycodone products in Kentucky. During 2000 the Pike County Coroner recorded 19 OxyContin-related deaths. Emergency room visits and deaths in eastern Kentucky attributed to OxyContin have increased significantly in the past 2 years. According to law enforcement, seven OxyContin-related overdose deaths occurred in southeastern Kentucky during December 2000.

The abuse of oxycodone products such as OxyContin has become so prevalent that officials in Kentucky are describing it as an epidemic. The number of patients seeking treatment for oxycodone addiction in Kentucky increased 163 percent, from 103 patients in FY1998 to 134 patients in FY1999 and to 271 patients in FY2000. By October 1999 several physicians had established pain clinics in southeastern Kentucky and were writing several hundred prescriptions for OxyContin on a daily basis. The Kentucky State Police report that OxyContin is more popular than cocaine in eastern portions of the state.

Abusers administer oxycodone using various means; the most dangerous is by intravenous injection. Intravenous administration involves combining crushed OxyContin tablets with water and injecting the mixture. Other abusers rub off the controlled-release coating on the tablets, crush them, and snort the powder. In eastern Kentucky abusers often have white streaks on their blue jeans indicating that they have been rubbing the coating off OxyContin tablets. Abusers sometimes use OxyContin as a suppository.

In some parts of Kentucky, OxyContin sells for \$25 per 20-milligram tablet. Individuals who are prescribed OxyContin for a legitimate medical condition may sell portions of their prescription to retail distributors in order to supplement their income. According to a survey of Kentucky State Police jurisdictions, the statewide average street price for OxyContin is \$1 per milligram. Users and distributors also obtain OxyContin by stealing the drug from pharmacies—Kentucky is one of the leading states for OxyContin-related robberies and burglaries. Between January 2000 and June 2001, 69 of the state's 1,000 pharmacies reported OxyContin-related burglaries or robberies.

Hydromorphone hydrochloride, known commercially as Dilaudid, is an organic compound of morphine and is classified as an opioid. As a pain reliever, it is two to eight times as potent as morphine. Abusers often dissolve the tablets and inject them as a substitute for heroin. Use of hydromorphone in Kentucky has diminished slightly, although it remains one of the top five

most commonly abused prescription drugs in Kentucky. According to a survey of the Kentucky State Police, the statewide average street price was \$30 per tablet in 2000.

Methadone hydrochloride, known commercially as Dolophine, is a synthetic opioid used primarily for the management of heroin and narcotic addiction at treatment centers. It is used to help alleviate the symptoms of narcotic addiction withdrawal. It is primarily administered as a liquid at treatment centers but is also available as a tablet. The tablet is designed to deter abuse via intravenous injection. However, the tablets are much easier to conceal and abuse than the liquid form. (Patients are usually required to ingest the methadone in the clinic while under observation.) Although it is closely regulated, illegal use is common. Methadone may be abused in combination with clonazepam or other benzodiazepines in order to enhance its narcotic effect. In eastern Kentucky 10-milligram methadone tablets are ground and dissolved in water before being drawn through a cigarette filter or similar filtering device; the drug then is injected intravenously. Cities with methadone treatment centers such as Bowling Green, Lexington, and Louisville, as well as those in neighboring states, are known as areas where diverted methadone and heroin transactions occur.

The effects of methadone last 24 hours before the drug is expelled from the body. Individuals may unintentionally overdose on methadone because they do not realize that the residual chemicals remain in the body long after the drug's intended effects have subsided. Abusers often ingest one drug after another until toxic levels build and respiratory failure, coma, or death occurs. As many as seven different pharmaceuticals have been detected in the blood of some methadone overdose victims in eastern Kentucky. In the fall of 2000, six individuals died from methadone overdoses in Breathitt County alone.

Club Drugs

The abuse of club drugs, especially GHB and MDMA, is increasing, particularly among young people. A resurgence in the availability of some hallucinogens—LSD, PCP (phencyclidine), psilocybin, and peyote or mescaline—at raves and dance clubs nationwide is also a concern. The perception by young people that these substances are harmless has led to increased levels of use. Peer pressure and cultural myths surrounding club drugs continue to undermine the warnings of healthcare professionals regarding the serious side effects associated with these drugs, and some individuals in Kentucky have become habitual, daily abusers. National statistics document a sharp increase in the use of club drugs—a trend just beginning in Kentucky. Although there are no specific statistics on club drug abuse treatment or arrests in Kentucky, several drug task forces report that MDMA, GHB, and LSD abuse and distribution by college students are increasing throughout Kentucky. The Kentucky State Police in Bowling Green reports an increase in MDMA and GHB abuse, primarily on a local university campus. Officials expect a similar increase in club drug abuse among local high school students near college and university centers.

Many users are experimenting with an extremely dangerous combination of club drugs, other illicit drugs, and alcohol. The wide range of drugs available at raves and parties provides opportunities for the dangerous use of drugs in combination—for example, MDMA and heroin or MDMA and peyote or mescaline, which some agencies refer to as new age speedballs.

Rave Organizers Attempt to Avoid Law Enforcement Detection

The Northern Kentucky Drug Strike Force reported that organizers of raves have adopted new strategies to avoid detection. Some rave organizers put notices on the Internet. They also advise attendees to park their cars at a shopping mall and catch buses to the rave parties where MDMA and other drugs are distributed. The task force indicated that the Internet notices claim the parties are “Christian” gatherings where drugs and alcohol will not be available. The task force made four arrests at a rave in Dry Ridge that used these tactics to attract 1,500 young people.

Source: *Crime Control Digest*, 21 September 2001.

Raves

Raves are all-night dance events that feature hard-pounding techno-music and flashing laser lights. They often are promoted through flyers and advertisements distributed at clubs, in record shops and clothing stores, on college campuses, and over the Internet. Owners and promoters often sell items associated with club drug use at these venues even though they deny any knowledge of drug use at their clubs. These items include bottled water to prevent dehydration, pacifiers to prevent involuntary teeth clenching, and menthol nasal inhalers, chemical lights, and neon glow sticks, necklaces, and bracelets—all of which enhance the effects of MDMA.

Rave parties and clubs are focal points for the rave culture and the distribution of club drugs in Kentucky; however, club drugs are distributed in all metropolitan areas and college communities throughout Kentucky and have recently been sold in smaller towns and cities across the nation. The schedule for raves closely follows the college semester cycle. Very few raves were held during times when colleges and universities were not in session. From 1993 through 2001 there were more than 146 documented raves held in Kentucky. Most took place in Louisville and Lexington. Other locations include Bowling Green, Covington, Erlanger, Murray, and Newport. In 1993 there was only one recorded rave in Louisville; by 1999 the number of raves had increased to 23 per year. From 1993 through 2000, 82 raves were held in

Louisville, accounting for more than 50 percent of all known rave activity in Kentucky. These numbers reflect only the raves that are documented; undoubtedly, there were many more raves that avoided law enforcement detection because the very essence of the underground rave culture is based upon spontaneity and secrecy.

Two Types of Raves

Rave clubs are underage clubs that are open two or three nights a week and employ floor managers and security guards. Admission averages \$10 to \$12, and no alcoholic beverages are served. Bottled water and blow pops, two common items purchased by ravers using club drugs, are sold at concession stands inside the clubs. Establishment owners and managers ignore the in-house distributors.

Rave parties are similar to rave clubs with the exceptions of location and cover charge. Rave parties usually are held in leased premises such as warehouses and halls where everything from disc jockeys, lighting, special effects, and security (often handled by ex-convicts) are contracted. Rave party planners typically charge \$12 to \$20 for admission.

Source: Pennsylvania Bureau of Narcotics Investigation.

MDMA. The availability and abuse of MDMA have increased in Kentucky. Also known as ecstasy, XTC, E, X, or Adam, MDMA is a synthetic, psychoactive substance with stimulant and mild hallucinogenic properties. MDMA is taken orally, usually in tablet form, and its effects last approximately 4 to 6 hours. If taken in tablet or capsule form, the onset of effects takes approximately 30 to 45 minutes; if snorted, smoked, or injected, effects are immediate. Known as the hug drug or feel good drug, MDMA reduces inhibitions and produces feelings of empathy for others, extreme relaxation, and the elimination of anxiety. In addition to chemical stimulation, the drug reportedly suppresses the need to eat, drink, or sleep. This enables users who frequent the club scene to endure all-night and sometimes 2- to 3-day parties or raves. The drug often leads to

severe dehydration and heat stroke since it has the effect of short-circuiting the body's temperature signals to the brain. An MDMA overdose is characterized by a rapid heartbeat, high blood pressure, faintness, muscle cramping, panic attacks, and in more severe cases, loss of consciousness or the onset of seizures. Users risk exhaustion from a combination of the drug's effects and the physical exertion of all-night dancing. The National Institute on Drug Abuse findings indicate that long-term use of MDMA causes significant, irreparable damage to the brain.

MDMA availability is increasing, primarily in Kentucky's urban areas; however, there is no evidence of increasing violent behavior associated with MDMA abuse in Kentucky. Violence typically is not associated with MDMA because it often creates increased feelings of friendship and compassion.

Although some MDMA production occurs in the United States, legislation enacted in 1990 makes it illegal to purchase or possess safrole, isosafrole, or piperonal—the primary MDMA precursors—without a permit and seems to have thwarted large-scale domestic production. There is no evidence that MDMA currently is produced in Kentucky.

Most MDMA reportedly is shipped into the United States from the Netherlands by way of Belgium and Germany. It is transported into Kentucky by couriers on airline flights originating in Europe destined for the Cincinnati/Northern Kentucky International Airport by way of California; Atlanta, Georgia; and Houston, Texas. MDMA is also transported into Kentucky from Miami, Florida.

The most common methods used to transport club drugs from other U.S. states and within the state are package delivery services, private and commercial vehicles, and public transportation. Louisville, Lexington, and Covington are major distribution centers for MDMA and other club drugs in the state.

MDMA is distributed at the wholesale and retail levels primarily by Caucasian males. The

MDMA Concealment Methods

MDMA users, particularly dancers at raves, employ a variety of methods to disguise or conceal MDMA tablets. Among the more popular methods are stringing the tablets on candy necklaces, wrapping them in cellophane candy packages, or stacking them in straws.

Source: Sioux Falls Drug Task Force.

distribution process usually involves three-person teams—the first person distributes the product, the second person collects the money, and the third person waits outside the club for the money.

GHB and Analogs. The availability and abuse of GHB (gamma-hydroxybutyrate) and its analogs—GBL, BD, GHV, and GVL—also are increasing, primarily in Kentucky’s urban areas.

GHB Analogs

Analog	Chemical/Alternative Name
GBL	gamma-butyrolactone furanone di-hydro dihydrofuranone
BD	1,4 butanediol tetramethylene glycol sucol-B butylene glycol
GVL	gamma-valerolactone 4-pentanolide
GHV	gamma-hydroxyvalerate methyl-GHB

GHB analogs are drugs that possess chemical structures that closely resemble GHB, a central nervous system depressant. GHB and its analogs are also known as liquid ecstasy, soap, scoop, Georgia homeboy, grievous bodily harm, liquid X, and goop. At lower doses they cause drowsiness, dizziness, nausea, and visual disturbances. At higher doses, unconsciousness, seizure, severe respiratory depression, and coma can occur. Because of their sedative properties, GHB and its analogs also have been used to facilitate sexual assaults throughout the nation.

GHB analogs are available at disreputable health food stores, gyms, and via the Internet. Originally sold in health stores, GHB was marketed as a releasing agent for growth hormones that would stimulate muscle growth. It is odorless, tasteless, and virtually undetectable if added to a drink. GHB is easily produced by combining GBL (gamma-butyrolactone), a chemical found in industrial cleaners and sold as a dietary supplement, with sodium hydroxide or potassium hydroxide in a cooking pot or bucket. The chemicals give off heat as they react, and the final product does not have to be isolated or separated from the solution. When ingested, GBL is converted into GHB. Lawful production of GHB occurs only in Europe. However, Internet recipes and the ease with which precursor chemicals can be legally obtained make the illicit production of GHB a potential problem in Kentucky as well as throughout the country. Most illegally produced GHB is in liquid form; the powdered form is much more difficult to synthesize and usually results only from commercial production.

The deadly consequences of GHB abuse in Kentucky became apparent in June 2000 when several young people who had visited a popular dance club in Lexington became seriously ill. It was not clear whether the individuals knew they had ingested GHB or thought they were drinking water. As a result of this incident, within a 36-hour period seven individuals were treated at a local hospital for GHB overdoses. One 27-year-old man died from a GHB overdose and a 22-year-old woman required the use of a respirator. Nationally, GHB was linked to at least 58 deaths and more than 5,700 reported overdoses from 1990 through 2000.

GHB and its analogs usually are distributed locally by the young Caucasian males who also produce GHB. They also transport it and are the primary wholesale and retail distributors of the drugs throughout the state. The ease with which GHB can be produced facilitates wholesale distribution of the drug. The retail distribution process involves three-person teams similar to those distributing MDMA. Most GHB and its analogs are distributed in liquid form at raves or on college campuses. GHB reportedly sells for \$10 per capful at raves in Lexington.

Hallucinogens

Hallucinogens include a broad range of drugs that induce hallucinations. Among them are ketamine, LSD, and psilocybin—a substance found in varieties of mushrooms that are frequently referred to as magic mushrooms or psychedelic mushrooms. Hallucinogen abuse is popular and increasing among college age students, particularly at raves and dance clubs in Kentucky.

Independent producers and distributors are the primary suppliers of hallucinogens. Like club drugs, hallucinogens are distributed and used primarily by young adult Caucasians, which probably best explains the appearance of these drugs at raves in Kentucky.

Ketamine. Also known as K, special K, or cat valium, ketamine is a disassociative general anesthetic for veterinary and limited human pediatric surgical use. First produced in the 1960s, ketamine was used extensively during the Vietnam War as an anesthetic for battlefield surgery. Medically prescribed use for humans is now very limited because of the hallucinogenic side effects. The product is diverted from legitimate sources; there are no reports of illicit production. The only known source of ketamine is through diversion or theft and burglary of medical clinics.

Ketamine liquid can be injected, applied to smokable material, or consumed in drinks. The powdered form is made by allowing the solvent to evaporate, leaving a white powder that, once pulverized, looks very similar to cocaine. Ketamine produces physical effects similar to PCP with the visual effects of LSD. Users report that they prefer ketamine to PCP or LSD. Use of the drug can cause delirium, amnesia, depression, long-term memory and cognitive difficulties, and fatal respiratory problems.

Veterinarians pay \$7 for a 10-milliliter vial of liquid ketamine that can be converted into a gram of powder. Diverted ketamine is sold at the wholesale level for \$30 to \$45 per vial and \$100

to \$200 for an equivalent amount at the retail level. Single ketamine doses, or bumps, of about 0.2 grams sell for \$20 to \$40. Ketamine usually is sold through a network of friends and associates; street sales to unknown buyers rarely occur. In June 2001 a Louisville task force seized 288 dosage units of ketamine shipped from San Diego, California, via a package delivery service to Louisville. Further investigation indicated that 10 similar shipments were made to the same individual prior to this seizure.

LSD. Also known as acid, boomers, and yellow sunshine, LSD is a hallucinogen that induces abnormalities in sensory perceptions. The effects of LSD are unpredictable and often depend on the amount taken, the environment in which it is used, and the personality, mood, and expectations of the user. The potency of the LSD available today (20 to 80 micrograms) is considerably lower than the levels of the 1960s and 1970s (100 to 300 micrograms). Users may feel the effects within 30 to 90 minutes. The physical effects include dilated pupils, sweating, loss of appetite, sleeplessness, dry mouth, tremors, and increased heart rate, body temperature, and blood pressure. LSD users report body numbness, weakness, trembling, and often nausea. Two long-term disorders associated with LSD are persistent psychosis and hallucinogen persisting perception disorder (flashbacks). LSD typically is taken orally and is sold as a tablet, capsule, or liquid as well as on pieces of paper (blotters), sugar cubes, or pieces of candy that have absorbed the drug.

LSD is available on a limited basis throughout Kentucky and is abused most frequently in urban centers, especially on college, university, and high school campuses. LSD abuse is closely associated with the abuse of other hallucinogens such as psilocybin mushrooms and with the abuse of marijuana. Statewide only a relatively small number of individuals abuse hallucinogens. LSD is readily available in the metropolitan areas of the state.

Kentucky Drug Threat Assessment

Demand for LSD treatment ranked in the top 12 for illicit drug abuse in Kentucky since 1997.

The production of LSD is time-consuming and complex, requiring some degree of expertise in chemistry. The procurement of precursor chemicals required for LSD production is difficult. The primary precursor chemicals are either ergotamine tartrate or lysergic acid amide, both of which are federally regulated. LSD is produced in California and transported into Kentucky and throughout the country in liquid and blotter forms. Wholesale distributors travel to source areas such as Sacramento and San Francisco to purchase a crystallized form of LSD. The product

is then transported back to the wholesale distributor's area where it is broken down into smaller amounts and sold to midlevel distributors. LSD is frequently marketed at music festivals and raves and sells for \$10 per hit or dosage unit.

Psilocybin. The active ingredient in a number of mushrooms, psilocybin varies widely in potency by species. Independent growers cultivate mushrooms indoors and frequently harvest those that grow wild. Doses normally range from 20 to 60 milligrams, and the effects generally last from 5 to 6 hours. Psilocybin availability is increasing in college towns across the state.

Heroin

Heroin poses a low threat to Kentucky because it is rarely available or abused in the state. Heroin availability is limited primarily to urban areas, and information regarding the heroin threat in other areas of the state is largely negligible. Most of the heroin available in Kentucky is produced in Mexico. South American heroin, which on average is higher purity than Mexican,

is available in at least one area of the state. Local independent Caucasian dealers, the dominant heroin distributors in the state, transport most of the heroin into Kentucky from major cities such as Chicago, Cincinnati, Dayton, Detroit, and New York. Mexican criminal groups also distribute heroin in the state but to an even lesser extent.

Abuse

Heroin is abused less frequently than other illicit drugs in Kentucky. Only 3 percent of all drug-related treatment admissions in Kentucky from FY1998 through FY2000 were for heroin abuse; however, there are indicators that the rate of heroin abuse increased during that period. Heroin-related treatment admissions increased from 458 in FY1998 to 542 in FY1999 and 561 in FY2000, according to the Kentucky Division of Substance Abuse. Louisville, Lexington, and Covington have the largest number of patients seeking treatment for heroin addiction, with Ashland, Bowling Green,

Hazard (Breathitt and Perry Counties), and Paducah also having a significant number.

While law enforcement authorities throughout eastern Kentucky continue to report low incidences of heroin abuse in the area, a new customer base, primarily college students, may be emerging in the Lexington area. Higher purity heroin gives users the option of snorting or smoking rather than injecting the drug. This option enhances the appeal to younger users and individuals who previously were hesitant to use the drug.

Availability

Heroin is not readily available in Kentucky; however, local law enforcement officials reported an increase in the number of heroin-related investigations, arrests, and seizures in 1999. FDSS data indicate that federal law enforcement officials seized no heroin in FY1997, 4.7 kilograms in FY1998, and 4.6 kilograms in FY1999. There were no reported seizures in FY2000; however, preliminary reporting indicates that there were 10.8 kilograms seized in FY2001.

Heroin is less prevalent than other illicit drugs in Kentucky and is available primarily in urban areas of the state. Most of the heroin available in Kentucky is produced in Mexico. Mexican brown powdered and Mexican black tar heroin are

reportedly available in Lexington and Ashland. South American heroin also is reportedly available in Ashland. The number of heroin investigations in Ashland increased dramatically since June 2001. Law enforcement authorities have also reported an increase in heroin availability in the Louisville area.

In 1999 STRIDE data indicated that heroin purity averaged 85 percent in Kentucky. Heroin prices in Kentucky remained stable from FY1995 through FY2000 then increased in FY2001. According to DEA, a gram of heroin sold for \$100 to \$300 in 2000, then increased to \$300 to \$400 in 2001.

Violence

There are no indications of significant increases in crime or violence related directly to heroin distribution and abuse in Kentucky. Violence associated with heroin distribution is limited, according to local police department officials. Nonetheless, the highly addictive nature

of heroin causes many users to commit criminal acts in order to obtain the money needed to purchase the drug. This often results in the abuser engaging in a wide variety of criminal activities including theft, burglary, and prostitution.

Production

Opium is not cultivated nor is heroin produced in Kentucky. Heroin is produced primarily in four source regions: South America, Southeast Asia,

Southwest Asia, and Mexico. Most of the heroin available in Kentucky is produced in Mexico.

Transportation

Local independent Caucasian dealers in their twenties are the dominant transporters of heroin into and throughout the state. Most heroin available in the state is transported by local independent dealers from cities such as Chicago, Cincinnati, Dayton, Detroit, and New York—heroin distribution centers. It commonly is

concealed inside private vehicles, usually in small quantities not exceeding several grams. The Lexington Police Department reports that heroin is transported into its area from New York by local independent dealers. The Covington Police Department reports that heroin is transported into its area from Cincinnati.

Distribution

There is limited reporting regarding heroin distribution in Kentucky. The Covington, Ashland, Louisville, and Lexington Police Departments report that local independent Caucasian dealers are the primary retail distributors in their jurisdictions. Mexican criminal groups also distribute heroin at the retail level but to a lesser

extent. Young Caucasian males purchase gram quantities of heroin at distribution centers in other states and return to Kentucky to distribute the drug. Heroin usually is sold in cities such as Bowling Green, Lexington, and Louisville, as well as cities in neighboring states.

Outlook

The variety of illicit drugs produced, distributed, and abused in Kentucky has exceeded the resources of law enforcement officials. Abuse of certain types of drugs is so pervasive that effective law enforcement and prevention efforts prove extremely difficult.

The number of methamphetamine abusers receiving treatment in Kentucky will likely increase even more dramatically in the near future as more abusers begin to experience the negative effects of long-term methamphetamine abuse. Methamphetamine production will continue to spread from western areas of the state to eastern areas as demand increases and as law enforcement officials devote more resources to detecting and seizing methamphetamine laboratories in the western areas. Methamphetamine laboratories will thrive in eastern Kentucky because of the large tracts of secluded land, which make detection more difficult. The toxic waste associated with methamphetamine production will continue to threaten the environment, present hazards to law enforcement officials, and create extreme burdens on state and local budgets.

Cocaine availability will continue to increase in Kentucky. As availability increases, violence will also increase, particularly in Louisville and other urban areas. The level of violence associated with crack distribution and abuse is high and there are no indications that this trend will change. The number of crack cocaine-related treatment admissions will likely continue to increase if the drug's

popularity increases in suburban and rural areas of the state.

Marijuana will remain the most widely available and frequently abused illicit drug in Kentucky. The state is one of the largest producers of marijuana in the nation, and there are no indications that this trend will change. The level of violence associated with production will continue to increase as growers protect themselves and their crops. The same types of groups that dominate the transportation and distribution of marijuana will continue to operate in the state.

Other dangerous drugs will continue to pose an increasing threat to Kentucky. Pharmaceutical abusers may transition from oral and nasal administration to intravenous injection as the stigma of this method is overridden by the abuser's needs. The number of pharmacy burglaries and robberies may increase as law enforcement officials, physicians, and pharmacists continue to utilize KASPER, the electronic prescription monitoring database, and other means designed to eliminate prescription fraud and doctor shopping. MDMA and GHB will continue to be abused in college and university towns, and abuse will continue to grow among young people in smaller cities and towns.

The overall number of heroin abusers receiving treatment may continue to increase as higher purity heroin that can be effectively smoked or snorted becomes increasingly available. As heroin availability increases, the level of violence associated with its distribution may increase as well.

Sources

State and Regional

Appalachia High Intensity Drug Trafficking Area

Ashland Police Department

Bowling Green Police Department

Bowling Green/Warren County Drug Task Force

Cincinnati/Northern Kentucky International Airport Drug Interdiction Task Force

Covington Police Department

Daviess County Sheriff's Department

Five County Area Drug Enforcement Task Force (FADE)

Ashland

Frankfort Police Department

Greater Louisville Inc. Chamber of Commerce

Hardin County Sheriff's Office

Jackson Police Department

Jefferson County Police Department

Lake Cumberland Area Drug Task Force

Lexington Police Department

Lexington Herald-Leader

Louisville Metro Narcotics Unit

Louisville Police Department

Messenger-Inquirer

Northern Kentucky Drug Strike Force

Owensboro Police Department

Paducah Police Department

Kentucky Drug Threat Assessment

Pennyrile Narcotics Task Force

Pike County Coroner's Office

Radcliff Police Department

Simpson County Sheriff's Office

State of Kentucky

Administrative Office of the Courts

Agricultural and Commercial Trade Office, www.kentucky.org

Cabinet for Economic Development

Division of Research

Cabinet for Health Services

Drug Control Branch

Criminal Justice Council

Department of Mental Health

Department of Transportation

Kentucky Vehicle Enforcement

Special Operations

Division of Substance Abuse

Justice Cabinet

Multijurisdictional Drug Task Forces

University of Kentucky

Community Mental Health Center

Research and Data Management Center

University of Louisville

State Data Center

Western Kentucky University

Kentucky Climate Center

www.aci-na.org

www.aircargoworld.com

www.airports.org

www.ravedata.com

www.stateline.org

www.statestats.com

National

Office of National Drug Control Policy

Organized Crime Drug Enforcement Task Force

U.S. Army Corps of Engineers, www.mvr.usace.army.mil

U.S. Department of Commerce

Census Bureau

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention

Youth Risk Behavior Survey

Substance Abuse and Mental Health Services Administration

Office of Applied Studies

Drug Abuse Warning Network

U.S. Department of Justice

Drug Enforcement Administration

Cincinnati

Detroit

Domestic Cannabis Eradication/Suppression Program

El Paso Intelligence Center

Federal-wide Drug Seizure System

Lexington

London

Louisville

Madisonville Post of Duty

System to Retrieve Information from Drug Evidence

U.S. Attorney's Office

Eastern District of Kentucky

Western District of Kentucky

U.S. Department of Treasury

U.S. Customs Service

Other

Associated Press

Crime Control Digest

Morgan Quinto Press

Narcotics Enforcement & Prevention Digest

USA Today

The Wall Street Journal

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