Drug Prospectus

SYNTHETIC DRUGS: Availability and Trafficking in Maryland

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INTELLIGENCE REPORT

The information in this report may be indicative of illegal drug availability and or trafficking in the

State of Maryland

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HALLUCINOGENS

The use of hallucinogens can be traced to prehistoric times. Used mainly for religious purposes, plants such as peyote and psilocybin, which have hallucinogenic properties, were sought by natives trying to contact the "spirit" world or seeking the "world within themselves".

Interested in the "mind altering" effects of hallucinogens, maverick researchers experimented with these plants long before the discovery of the synthetically derived hallucinogen lysergic acid diethylamide, or LSD. However, it was LSD that sparked the Psychedelic Era in the 1960's.[1]

D-LYSERGIC ACID DIETHYLAMIDE 25

Background

D-Lysergic Acid Diethylamide 25 is more commonly referred to as LSD or acid. The number, 25, refers to the substance being the twenty-fifth in a series of related chemicals. LSD is synthetically derived from an alkaloid found in the rye fungus ergot or from lysergic acid amide, a chemical found in morning glory seeds and the natural precursor for LSD. LSD, in its pure form, is a crystalline powder. Although ergot fungus and lysergic acid are controlled under the Controlled Substance Act (CSA) as Schedule III substances, LSD is a Schedule I. It has no medicinal uses. The "crystal", as it is referred, is diluted into a liquid using alcohol or sugar water in order to be absorbed on blotter paper or a clear gelatin (known as windowpane) or pressed into tablet called microdots. LSD is colorless, odorless, and tasteless.

History

LSD is one of the newest of the hallucinogenic drugs. It is only one of a few that are synthetically derived. LSD was first synthesized in 1938 in Switzerland for Sandoz Laboratories by Dr. Albert Hofmann. Its original intention was to be a potential remedy for migraine headaches. In 1943, while Dr. Hofmann was preparing a batch of LSD-25, that he accidentally ingested some and experienced the first "acid trip". The images he saw when he closed his eyes were "an uninterrupted stream of fantastic images

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[1] Axton, Joe E., Jeremy Bigwood and Jonathan Ott. Hallucinogens: A Comprehensive Guide for Laymen and Professionals, 1984, Do It Now Foundation, p. 5.

of extraordinary plasticity and vividness...accompanied by an intense kaleidoscopic play of colors."

Dr. Hofmann turned over the LSD to the pharmacological department of Sandoz Laboratories. It was tested on cats, mice, and other lab animals. It was also used on some patients of a psychiatrist at the University of Zurich. It was believed that, in small doses, LSD helped some patients to express feelings that they had otherwise repressed. In 1947, Sandoz Laboratories released LSD into the market under the name Delysid.

The United States Army and the Central Intelligence Agency (C.I.A.) became interested in LSD. The Army felt they could use LSD against an enemy by getting them "high" and then disarming them. Suspecting that LSD could be used for mind control, the C.I.A encouraged testing the theory on human subjects. However, LSD was ineffective for this use.

Psychologists became interested in LSD when they discovered that the effects of LSD seemed to produce a temporary model psychosis. Some psychiatrists took the drug themselves in order to feel empathy and understanding for their patients' disorders. Acid Tests were done at the Menlo Park Veteran's Hospital between 1959 and 1967 to further study the effects of LSD. One of the participants in the tests was Ken Kesey, author of <u>One Flew Over the Cuckoo's Nest</u>. By the mid-1970's, when federally funded research on LSD ended, more than 10 million Americans had tried LSD and over 2,000 papers had been written on its use and effects.

In the early sixties, Dr. Timothy Leary and a group of students and friends experimented with hallucinogens at Harvard University. The experimentation caught the attention of the Federal Drug Administration and local law enforcement. In 1963, Dr. Leary and his colleague, Dr. Alpert, were asked to leave their positions at Harvard. The vast amount of publicity associated with his departure catapulted LSD into the national limelight and was credited with the launching of the Psychedelic Era.

<u>Pharmacological Effects</u>

LSD, as with all hallucinogens, works within the brain. Hallucinogens are structurally related to the neurotransmitter serotonin producing changes within the consciousness. Impulses between brain cells are interrupted. However, it is not known if the interruption occurs at the point of junction between the cells or within individual cells. Because most of the major hallucinogens, such as LSD, DMT (N,N-dimethyltryptamine) and psilocybin, cause similar reactions on the brain, "cross-tolerance" is observed. Cross tolerance is the decreased strength of one drug if taken shortly after another. Therefore, if a person had experienced a full blown hallucinogenic experience on LSD, there

would be a decrease in the effect of another hallucinogen, such as mescaline, taken the next day.[2]

The effect of LSD can be felt within 30 to 90 minutes after ingestion. LSD is rapidly absorbed through the gastrointestinal tract and is diffused to all tissues in the body. The effects of LSD usually peak at about 2 to 4 hours and can last anywhere from 8 to 12 hours.

Reactions to LSD depend on several factors including the dosage, the environment where the drug was taken, the user's emotional state and personality, and the attitude and expectation the user has about LSD. For example, if the user is in a bad mood, a "bad trip" is more likely to occur. Short term effects vary from use to use and from user to user. Some of the physical effects of LSD can be numbness, muscle weakness, dilation of the pupils, impaired coordination, and increased heart rate, blood pressure and body temperature.

Another physical effect of LSD is called Post Hallucinogenic Perception Disorder (PHPD)[3]. This affliction is the result of the relation of LSD to serotonin in the brain. PHPD sufferers will see trailing objects or imagine faces in walls and these hallucinations do not stop once the LSD high is over. These hallucinations, occurring most commonly when the sufferer is in the dark or is under stress, are not flashbacks but rather the effect of continuing chemical reactions in the brain that may continue sporadically for the life of the sufferer. Consequently, PHPD sufferers have suicidal tendencies. Occasionally, PHPD can be treated with medication.

LSD is the most potent of the hallucinogenic drugs; one milligram of LSD would be enough to kill an elephant. Therefore, it is measured in micrograms which are one millionth (1/1,000,000) of a gram. In the 1960's, during the peak of the psychedelic era, the average dose of an LSD hit was between 150 and 300 micrograms. Because of the higher levels of micrograms, bad "trips" were more likely to occur. Today, the average dosage unit contains between 20 and 80 micrograms. One gram of crystal LSD can produce 10,000 dosage units at 100 micrograms per hit.

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[2] Jacobs, Barry L. "How Hallucinogenic Drugs Work", American Scientist, July-August 1987. Volume 57, p. 386.

[3] Post Hallucinogenic Perception Disorder was discovered by Dr. Henry Abraham, director of Psychiatric Research at St. Elizabeth's Hospital in Boston, Massachusetts. He has studied the disastrous effects of LSD for 21 years.

LSD is produced in clandestine laboratories. A clandestine lab, as defined by the Drug Enforcement Administration Agents Manual, is:

> "an illicit operation consisting of sufficient apparatus and chemicals that either have been or could be used in the manufacture or synthesis of controlled substances. This definition specifically excludes LSD blotter or other dosage unit production operations..."

According to the Drug Enforcement Administration (DEA), there have been only 9 labs seized since 1981. The last major LSD clandestine lab seizure was in Bellevue, Washington in 1981. This sophisticated lab had the capability to produce 1.5 million dosage units of LSD. Approximately 33.3 million dosage units of LSD in tablet and powder form were seized.[4]

User Profile

LSD use has subsided since the decline of the psychedelic era of the 60's and 70's. One remaining pocket of LSD loyalty remains with the followers of the popular rock music group, The Grateful Dead. These "Deadheads" widely distribute and abuse LSD, as documented by police arrests and hospital emergency room admissions in areas where the Grateful Dead appear in concert.

According to the survey of Drug Use Among American High School Seniors, College Students, and Young Adults, 1975 - 1990 by the United States Department of Health and Human Services, use of LSD by high school seniors has increased slightly. The following table represents the activity:

DRUG USE AMONG AMERICAN HIGH SCHOOL SENIORS
LSD USE: 1986 - 1990

	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990
Use in Past 30 Days	1.7	1.8	1.8	1.8	1.8
Use in Past 12 Months	4.5	5.2	4.8	4.9	5.4

[4] Clandestine Laboratory Seizures in the United States, Drug Enforcement Administration - Office of Intelligence, September 1991, p. 28.

The Maryland Substance Abuse Management Information System (SAMIS) reports that there is an increase in mentions of hallucinogens, other than PCP, at admission into a treatment center. Hallucinogen mentions have increased every year from 1989 to 1991. In 1989, 1.5% mentioned hallucinogen use, in 1990, 1.9% mentioned hallucinogens, and in 1991 the percentage rose to 2.2%.

SAMIS data for mentions by adolescents (under 18 years of age) reported an increase in the number mentioning hallucinogenic use (other than PCP) at admission to a treatment center. Hallucinogen mentions also rose from 1989 to 1991.

SAMIS DATA FOR HALLUCINOGENIC MENTIONS
(Other than PCP)

	FY 88	FY 89	FY 90	FY 91
Adolescents (under 18)	8.9%	8.4%	11.6%	13.4%
Total respondents	1.7%	1.5%	1.9%	2.2%

Unfortunately, SAMIS data makes no distinction between LSD and other non-PCP hallucinogens. However, most SAMIS mentions for hallucinogens relate to LSD. With that caveat, LSD appears to be currently making a comeback in user popularity. As the use of LSD increases, the level of perceived harmfulness of taking LSD on a casual basis remains low. This is best illustrated by the following table, which is taken from Drug Use Among American High School Seniors, College Students, and Young Adults, 1975 - 1990:

PERCEIVED HARMFULNESS OF LSD
(% saying "great risk")

	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990
Used once or twice	42.0%	44.9%	45.7%	46.0%	44.7%
Taken regularly	82.6%	83.6%	84.2%	84.3%	84.5%

The typical LSD user appears to be young, affluent, suburban caucasian. LSD is popular among high school and college students. Drug Use Among American High School Seniors, College Students, and Young Adults, 1975 - 1990 also found that as the educational level of the parent increased, so did the likelihood of the respondent's using or having used LSD.

Another indication of an increase in LSD use is the Drug Abuse Warning Network (DAWN). DAWN emergency room drug mentions for Baltimore show an increase in LSD mentions from 1989 to 1991. The following table shows this trend:

DAWN Emergency Room Admissions			
Baltimore	1989	1990	1991
LSD	21	34	67

Several possible reasons for the gain in popularity among the young user population are price, addictiveness and route of administration.

Price: LSD can be purchased for as low as $2 a hit. However, the average price is $5, compared to crack at $20 for a rock or marijuana at $16 for one gram [5].

Addictiveness: LSD also provides a high that lasts for up to 12 hours and, unlike crack and heroin, is not physically addicting.

Route of Administration: LSD is primarily taken orally: either eaten or licked from a piece of blotter paper or gelatin (called windowpane), or by the ingestion of a small pill known as a microdot. No drug paraphernalia is needed. Because of its small size, LSD can easily be concealed.

Another likely cause for the resurgence in popularity of LSD is the increased awareness of the 1960's. Many young Americans and Europeans are revisiting the fashions and music of this turbulent time in our history. From the tie-die fashions of Haight-Ashbury to the music of the Grateful Dead and a number of other bands now producing anniversary albums, the 1960's are in the limelight. High school and college students are beginning to listen to the music and wear the clothes from their parent's generation. The popular drugs of this era are also making a strong comeback, LSD being in the forefront.

Availability/Trafficking Indicators

The main source of LSD is still the northern California/San Francisco Bay area. Recent reports, however, seem to reveal a move to Oregon and Washington due to the increase in law enforcement

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[5] Prices are from the Price and Purity Report for the period 7/1/90 to 9/30/91 by the Maryland State Police, Criminal Intelligence Division.

efforts in northern California. Traffickers of LSD obtain their LSD, either in liquid or crystal form, from California by U.S. Mail, commercial couriers (U.P.S., Federal Express), or at a Grateful Dead concert. Sometimes, traffickers arrange to fly to California and obtain the LSD directly from the source at a specified meeting place.

The Drug Enforcement Administration has developed an organizational breakdown of the highly structured, tightly knit LSD trafficking organization. The five levels of the organization are: Inner Circle, Outer Circle, Gram Dealers, Local Wholesalers, and Local Retailers.

The Inner Circle consists of the chemists who are actually producing the LSD. Manufacturing LSD is very difficult and the purification process is even more laborious. Therefore, probably only a small handful of chemists are actually producing the crystal.

The Outer Circle consists of multi-gram dealers. The multi-gram dealers buy the crystal or powder LSD in several gram weights. The crystal is divided and packaged into individual gram quantities.

The Gram Dealers purchase several of the gram packages from the multi-gram dealers. Each gram of crystal can produce 10,000 dosage units of LSD of approximately 100 micrograms each. The gram dealer may also supply the buyer with blotter paper.

The Local Wholesalers purchase a gram of crystal LSD, convert it into liquid, and impregnate the blotter paper with it. Recent reports indicate that some dealers drop LSD on sugar cubes and sell them. The wholesalers then sell the blotter, which is usually perforated into 100 squares per sheet.

The Local Retailer purchases blotter from the Local Wholesalers for approximately $45 to $100 per sheet. They sell "hits", equivalent to one square of the blotter, for $2 - $5.

LSD Traffickers are primarily Caucasian males between the ages of 18 and 25. The following table shows the demographics of LSD traffickers as recorded by entries in the Drug Enforcement Coordination System maintained by the Criminal Intelligence Division of the Maryland State Police.

SEX		RACE		AGE		
Male	Female	White	Black	18-25	26-30	31-44
83.3%	16.7%	95.2%	2.4%	85.7%	10.7%	3.6%

LSD investigations, reported to DECS, have increased since 1989. In 1989, only 17 LSD cases were reported. In 1990 the cases increased to 21 and nearly tripled in 1991 with 61 cases reported to DECS.

PHENCYCLIDINE (PCP)

History

In 1956 phencyclidine, more commonly referred to as PCP, was developed, and synthesized by Parke-Davis Laboratories and marketed under the trade name of Sernylan. It was originally developed as a surgical anesthetic but because of the adverse side effects including confusion and delirium, phencyclidine was banned for human use. Later, phencyclidine was introduced to veterinary medicine as an immobilizer and anesthetic for large animals.

PCP escaped the veterinary shelves and made its debut into the illegal drug culture in the summer of 1967 in San Francisco as the "Peace Pill". PCP soon achieved a bad reputation for unpleasant side effects including feelings of panic, terror, confusion, and isolation. However, because PCP is cheap and relatively easy to manufacture, it remained in the illicit drug market often as a drug of choice, particularly among blacks.

In 1978, legal manufacture of PCP was discontinued, and it was moved from Schedule III to Schedule II of the Controlled Substance Act.

Pharmacological Effects

PCP demonstrates all the same effects of a stimulant, depressant and a hallucinogen. It is often referred to as a "dissociative anesthetic" because a person can experience touch and pressure, but pain is not perceived by the brain.

Although PCP can be produced in powder, tablet and liquid form, it is most commonly sprayed on marijuana or parsley flakes for street sale. When smoked, the effects of PCP are felt within 5 minutes, reaching its peak in 30 minutes, and lasting a total of about 4 - 6 hours. In most cases, the effects of PCP may take up to 24 hours to subside. Taken orally, the effects of PCP are felt in about an hour. Because it is soluble in the muscle and fatty tissue of the body, weeks before it is excreted from the system.

Psychological effects of low doses of PCP (5 mg) include feelings of euphoria and apathy, sensory distortions, impaired concentration, and memory loss. Feelings of depression can sometimes trigger suicide attempts. One of the most recognizable symptoms of PCP use is violent or destructive behavior. In some instances, PCP mimics acute schizophrenia.

Large doses of PCP (10 mg or more) increase the risk of violent, destructive, or aggressive behavior. Users may experience feelings of invincibility. Physical effects may include an irregular heartbeat, alternating between high and low blood

pressure, slow, shallow breathing and heavy salivation and sweating. Very high doses (150 to 200 mg) can cause respiratory or cardiac arrest.

Deaths from an overdose of PCP are uncommon and are usually due to PCP in combination with another drug or alcohol. Accidental deaths from drowning, jumping from high buildings and self-mutilation have been attributed to PCP use.

PCP users often cannot feel pain because of its anesthetic properties. When trying to restrain an individual under the influence of PCP, the user may view restraint as assault and fight back, not responding to traditional non-deadly use of force tactics. If a user is experiencing a hostile reaction to PCP, he/she should be protected from doing harm to him/herself or others. Attempting to "talk down" a bad trip may cause more agitation or paranoia. Medical personnel need to be aware of PCP use as PCP does not react well with some drugs that are commonly used to abort bad trips, such as Thorzine.

User Profile

PCP abuse seemed to escalate from 1981 to 1985 and the steadily decreased, possibly due to the introduction of crack/cocaine.

The primary users of PCP are caucasian males in the mid twenties to early thirties. According to the National Household Survey on Drug Abuse, 1991, 84% of those reported having used PCP were caucasian, 62% were males, and 81% were over 26 years of age.

According to the Substance Abuse Management System (SAMIS) data for the fiscal years 1988 to 1991, PCP mentions at the time of admission into a treatment center has steadily decreased since 1988. However, Maryland law enforcement seizures of PCP steadily increased in the later part of 1991 and throughout 1992. If this current trend indicates a change in patterns of PCP use, treatment admission may begin to increase in 1993.

SAMIS DATA FOR PCP MENTIONS				
YEAR	1988	1989	1990	1991
Adolescent (under 18)	20.6%	16.5%	7.8%	5.3%
Total Respondents	11.7%	10.5%	7.1%	5.2%

The Drug Abuse Warning Network (DAWN) also shows this sporadic increase and decline with PCP use. In 1988, the number of emergency room mentions was 302, in 1989 it decreased to 159, in 1990 the number decreased to 124, and in 1991 the number rose to 157.

Availability and Trafficking

On the streets, PCP is often misrepresented as other illicit drugs including the more expensive mescaline. PCP is also known as DOA (Dead On Arrival), killer weed, embalming fluid, supergrass, and rocket fuel.

The increase in seizures from highway interdictions may indicate increased availability for 1991. A total of 582.7 grams of PCP was seized in 1991, compared to only 159.8 grams in 1990. The increase in PCP continued into the first six months of 1992 with 1,135 grams seized.

PCP is primarily manufactured and trafficked by caucasians. The overwhelming majority of individuals who are being investigated by Maryland State Police for PCP trafficking are white males between the ages of 26 and 30.

The Maryland State Police, Police Survey into the Nature and Extent of the Drug Problem in Maryland supports this data: 63% of the PCP traffickers are between the ages of 22 and 40, 74.5% were caucasian, and 83% were males. Washington, D.C. was listed as Maryland's source for PCP.

The data is also supported by the Systemwide DECS Assessment, July 1992, for the period October 1, 1991 to March 31, 1992. Fifty-two percent of those being investigated for PCP are between the ages of 18 and 30, 85.3% are caucasian, and 68.4% are male.

PCP packaging has remained the same over the last eighteen months: 35mm film canisters, vanilla extract bottles, apple cider jugs and spice bottles are common methods of packaging and transporting large quantities of the drug.

However, an interdiction stop on January 10, 1992 by a member of the Special Traffic Enforcement Unit of the Maryland State Police on Interstate 95 resulted in the discovery of an unusual PCP packaging method. The PCP was already sprayed on suspected marijuana in user quantities and was wrapped in plastic and placed in paper envelopes. The envelopes were approximately 1.75" by 2.75" with a sticker affixed to the front that read, "Crazy Eddie..is Back" and a cartoon drawing of a man. The origin of the PCP was a housing project in east Harlem, New York. According to New York City Police, this packaging was used to differentiate this particular PCP from others. "Crazy Eddie" is regarded as one of

the best on the street. To date, this was the only "Crazy Eddie" interdicted by the Maryland State Police.

According to DEA, there were 30 PCP laboratory seizures in 1984, 20 in 1985, 8 in 1986, 11 in 1987, 21 in 1988, 11 in 1989, and 11 in 1990.

DIVERTED PHARMACEUTICALS

Although pharmaceutical drugs are diverted into the illicit market everyday, this type of drug diversion is seldom mentioned in the media or the subject of public concern. This apathy may be due in part to the feeling that pharmaceuticals are not as dangerous as illicitly produced drugs, because they are legally manufactured and are tested and approved by the government. Reports of violence or large amounts of money associated with trafficking diverted drugs are rare.

A major concern should be the enormous cost of diversion to the taxpayer. Government programs such as Medicaid are fertile ground for drug traffickers to increase profit margin. For example, Medicaid cards sell on the black market for as much as $100. The seller can report the card lost and receive a new one. Using a Medicaid card, a person can purchase a drug, such as Percocet, for approximately $.50 a pill with the Government paying the difference. This same pill will sell on the st' eet for as much as $5 to $7.

COMMONLY DIVERTED PHARMACEUTICALS

Diazepam

Diazepam, commonly known by the brand name of Valium, is the most widely prescribed medication in western countries[6]. Diazepam is also one of the most widely abused licit drugs in the United States.

Valium was introduced in 1963 as a mild tranquilizer to relieve anxiety, tension, or stress. It is also used to ease muscle spasms, aid in the control of spasms, and in the relief of acute alcohol withdrawal. It is part of a group of related depressants known as benzodiazepines, which also includes alprazolam, the controlled substance in Xanax. Valium soon replaced Librium, another benzodiazepine tranquilizer, in the number of prescriptions filled. There were 61.6 million prescriptions filled for Valium in 1975. The adverse reactions and abuse of the drug began to cause some concern, and diazepam was placed under the CSA as Schedule IV. When the patent for the manufacture of Valium expired in 1985, other companies began producing diazepam medications. However, Valium is still the most popular.

Diazepam varies in its effects from person to person and from

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[6]United States Department of Justice, Drug Enforcement Administration, "Diazepam", Intelligence Trends, Volume 14, No. 2, 1987, p. 1.

one use to another. Gender, age, health, and the use of other substances all play an important role in the effect that diazepam has on an individual. It can, as with other benzodiazepines, cause increased aggression if the individual is prone to this behavior. Diazepam can also damage learning abilities, disorientation, and motor skills. Dependence can develop as early as two weeks of use or after four months, depending on the dosage.

Withdrawal from diazepam can take from twenty-four hours to several days. Abrupt discontinuance may result in convulsions, tremors, abdominal and muscle cramps, vomiting and sweating, anxiety and agitation, and increased heart rate. A gradual decrease in the dosages usually lessens the severity of the withdrawal.

Companies that manufacture and market licit diazepam in either a tablet, white powder, or injectable liquid form include Roxane, Barr, Duramed, Geneva, Mylan, and Par.

Oxycodone

Oxycodone with acetaminophen is marketed under the brand name Percocet, and oxycodone with aspirin is marketed as Percodan. It is found under the Controlled Substance Act as Schedule II. Oxycodone, in its pure form is a white, odorless crystalline powder with a bitter taste. Oxycodone, the main ingredient in Percocet, is a semisynthetic narcotic analgesic with effects similar to morphine. Oxycodone can produce a morphine type of drug dependence and has a high potential for abuse. Oxycodone medications are prescribed for the relief of moderate to severe pain.

Oxycodone varies in its effects from person to person and from one use to another. Gender, age, health, and the use of other substances all play an important role in the effect that oxycodone has on an individual. When oxycodone is taken orally, it retains at least half of its analgesic affect, much like methadone and codeine.

Percocet and Percodan are manufactured and marketed by Du Pont Pharmaceuticals. Other companies that manufacture pharmaceuticals with oxycodone are Roxane, Barr, and McNeil Pharmaceuticals.

Hydromorphone Hydrochloride

Hydromorphone hydrochloride is the principal ingredient in Dilaudid, a narcotic analgesic. The primary medical use is to relieve pain. Dilaudid, like morphine, has no actual limit to the amount of relief it can provide, alleviating even the most severe pain.

Dilaudid is popular in areas where there is a high prevalence of heroin. Dilaudid provides the user with a morphine-type high, the same high they are seeking in heroin. According to data received from DEA's Automation of Report and Consolidated Orders System (ARCOS), in 1985 Maryland ranked number 13 in hydromorphine distribution. However, by 1986, Maryland soared to number two and has since remained in the top two positions. The high incidence of Dilaudid use in Maryland was attributed to the many well known medical hospitals here, causing the demand to increase. However, according to S/A Bob Bickel of DEA, aside from all of the cancer and terminal patients in the hospitals who need Dilaudid or other drugs, Maryland still ranks as one of the top two states.

Alprazolam

Alprazolam is the principal ingredient in Xanax. Alprazolam is a white crystalline powder, soluble in methanol or ethanol, but not water soluble in water. Alprazolam is in the benzodiazepine family, which are central nervous system depressants.

Alprazolam is used for the management of anxiety disorders, or short-term relief from them. Physical addiction to alprazolam can occur; therefore, abrupt discontinuance from the drug is not recommended. Abrupt withdrawal can result in the same symptoms as with alcohol or barbiturates. Overdoses of alprazolam include impaired coordination, diminished reflexes, and coma.

AVAILABILITY/TRAFFICKING

Pharmaceutical drugs are trafficked primarily by caucasians in their 30's to early 40's. According to the Systemwide DECS Assessment, July 1992, 85.6% of those being investigated for diversion are caucasian, 61.4% are between the ages of 31-44, and 69% are male.

Drug diversion has been evident for decades, but is not viewed by the public as a problem because people are not dying from them as with crack or heroin. However, the cost for the abuse of fraudulent use of Medicaid alone is high.

Street-level traffickers of diverted pharmaceuticals usually operate in groups or as individuals. According to Tfc. David Hammel, Maryland State Police, Drug Enforcement Division, Drug Diversion Unit, the three levels of a diversion organization are the writers, who write the forged prescriptions; the runners, who take the forged prescription and go to different pharmacies to have them filled; and the sellers, who sell the pharmaceuticals on the street. Many times, log books are found when a drug ring is broken. These log books are full of detailed information such as doctors were seen and when, which pharmacies were used and when, and the types and amounts of drugs received and sold.

Pharmaceutical drugs are diverted into the illicit market in several ways. One method is doctor shopping. An individual travels from doctor to doctor, sometimes several in one day, attempting to obtain prescriptions for controlled substances for some medical reason, which may be legitimate or fabricated. The doctors, in these cases, are often legitimate and prescribe the drug for presumed valid medical reasons.

Another method of obtaining prescriptions is forgery. Prescription pads can be stolen from a doctor, illegally purchased from a doctor or on the street, or printed by a print shop, on the pretext that the individual was a representative of a doctor's office and using a DEA number that was either false or stolen. The individual can then write his/her own prescription and get it filled at a pharmacy. The person may enter the pharmacy in after business hours, making verification of the prescription difficult. Moreover, the "office number" may be a pay phone or home number, with an accomplice to answer the phone and pose as the doctor.

Pharmacy theft is another method for pharmaceuticals to be diverted into the illicit market. Internal theft occurs by employees or by burglary of the premises.

Enforcement Activities

Several law enforcement agencies, such as Montgomery County, Baltimore County, Prince George's County, Anne Arundel County and Maryland State Police, have diversion units. The main concentration of investigations for Maryland State Police are the professionals, such as doctors and pharmacists. Cases against professionals can be arduous because the burden of proof can be difficult to obtain. There is a need to have experts testify, which may require doctor testifying against doctor, or pharmacist against pharmacist, which can be difficult in the medical community. The opinions within the medical community on the method of treatment or operations varies from professional to professional; therefore, the aspect of right or wrong is difficult to justify. These are probably the hardest drug cases to prove because the suspect is a professional and is not viewed as a menace to society. The public can hardly believe that a person with so much education and knowledge would jeopardize his/her career by diverting drugs. Asset seizure can also be difficult in diversion cases against professionals since it is hard to differentiate between those of illegitimate means and those assets gained from a practice.

Although drug diversion investigations can be laborious and knowledge of the various drugs immense, the need for investigations is being recognized by various agencies. However, less than five percent of the systemwide entries into DECS involve pharmaceuticals.

METHAMPHETAMINE

Methamphetamine hydrochloride, also referred to as "meth", is the strongest of the amphetamine group. It was first synthesized by a Japanese chemist and used by the Japanese army during World War II in order to allow the troops to fight longer without the need for rest or food. In the 1950's, low doses were given to pregnant women in order to reduce weight gain. Physicians used methamphetamine to treat hypersensitivity in children and obesity in adults. In the 1970's, health dangers associated with meth use caused doctors to decrease the amount prescribed. However, meth began to find its place in the illicit drug market.

Methamphetamine still has a limited medical use under the brand name Desoxyn. The Physicians Desk Reference gives an explicit warning on the potential for abuse of Desoxyn and cautions that subjects may obtain the drug for non-therapeutic use. Desoxyn is used for weight reduction for obese patients who have exhausted all other means to lose weight.

Pure methamphetamine is a white, crystalline powder. However, because illicit methamphetamine is manufactured in clandestine laboratories, it may be yellowish in color and may come in the form of chunks. Methamphetamine is odorless and is bitter to the taste.

Methamphetamine can be pressed into capsules or tablets, to resemble a licit drug and swallowed, in powder form and snorted, or diluted in water and injected. Chunks of very pure meth, more commonly referred to as "ice", can be smoked. Sometimes, methamphetamine is mixed with heroin and called "speedball". Approximately ninety percent of methamphetamine users inject the drug. Occasionally, users mix the powder in a liquid, such as hot tea, and drink it. This is referred to as "snot", due to the way it congeals and floats on the top of the liquid like a scum.[7]

Pharmacological Effects

Methamphetamine is part of the amphetamine family and is a strong central nervous system stimulant. It can be physically and psychologically addictive. Meth works on the brain's transmitter system with an effect similar to adrenaline or epinephrine, produced naturally within the body.

Meth produces increased energy and a sense of well-being, and it suppresses the appetite. Continued use may cause sleeplessness, paranoia, and anxiety. Overdose of meth can cause nausea and vomiting, delirium, seizures, coma, and death.

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[7] Bowes, Mark, "Teatime Takes an Unappetizing Twist for Area Drug Users", News Leader.

User Profile

Methamphetamine decreased in the 1970's because of increased law enforcement efforts on illicit production and a decrease in the number of licit prescriptions. Ice, the smokeable form of methamphetamine, reported to be on the rise in some parts of the country, such as Hawaii, and to a lesser degree, California.

According to the Maryland Adolescent Survey Report for 1990, methamphetamine use for Maryland high school seniors in the past twelve months was three times the amount of national use. There were 2.4% of high school seniors reporting use of methamphetamine within the past twelve months, the national level was .6%.

The highest percent of those Maryland adolescents surveyed for use of methamphetamine within the past twelve months were tenth graders. The following table shows the percent of meth use for 1990 in the past twelve months:

MARYLAND ADOLESCENT SURVEY 1990				
GRADE	6th	8th	10th	12th
Methamphetamine	0.9	2.6	5.2	5.1

Methamphetamine use increases with each grade, slightly decreasing from tenth to twelfth grade.

Methamphetamine use appears to be sporadic. It declined during the 1970's, but is still prevalent on the West Coast. Demand on the East Coast seems to have remained steady, with a possible slight increase.

Availability/Trafficking

Methamphetamine is commonly associated with outlaw biker gangs. It is predominately trafficked and used by caucasian, lower-income individuals, many of whom are associated with or are members of gangs.

Source

Methamphetamine labs have been seized in motel rooms, campers in the woods, basements, and apartments. Due to the nature of the chemicals involved, explosions are not uncommon.

There are several methods used to make methamphetamine. Many of the precursors needed for the manufacture of methamphetamine are illegal to possess. There are two basic methods of clandestinely manufactured methamphetamine . One is the P-2-P (phenyl-2-

propanone) method; the other is the ephedrine reduction method. The ephedrine reduction method, more common on the West Coast, is popular for two reasons: it is easier and the affects of its product have a greater affect on the user.[8] However, ephedrine has become increasingly harder to purchase due to tighter controls.

On the East Coast, the P-2-P method is most common. However, the main problem with P-2-P is that this precursor is very difficult to obtain. A method to produce P-2-P clandestinely was developed to alleviate the need to purchase the precursor.

In the northwest region of the United States an older method, replaced by other methods because it takes longer, has begun to re-appear. This method involves the use of chemicals that are very easy to obtain, and are less likely to be controlled due to the widespread legitimate use. Some of the chemicals are used as food additives, gas additives, and for photo developing. There are little, if any, controls on these chemicals. These are used to make nitropropene crystals, which are used to make P-2-P, the precursor to methamphetamine.

Due to the nature of certain chemicals and their reaction to one another, heat and fancy chemical equipment are not needed. Some of the "cookers" use beer kegs, fountain soda canisters, and pressure cookers to make P-2-P and other precursors or drugs. The necessary chemicals are added, the top is sealed, and the chemical process begins. This method adds days to the time it takes if heat were used; however, this method can more easily be disguised. The cans become extremely hot due to the combustion. When finished, the can is cooled, often in a river, for 4-6 hours; then the chemical can be extracted.

Future Problems

Although methamphetamine can be found within various regions of Maryland, it does not appear to be a widespread problem. This may be due to the fact that Maryland does not have a strong outlaw biker population such as New York or California. A recent methamphetamine lab was seized in Cecil County, Maryland by the Cecil County Task Force. There were no seizures done by DEA in Maryland.

Methamphetamine lab seizures nationwide have decreased from 1989 to 1990. However, the number of ephedrine method labs have increased. According to DEA, a total of 652 meth labs were seized in 1989 and 429 labs in 1990. The majority of the labs seized in 1990 were in California, with a total of 225.

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[8] "Clandestine Laboratory Seizures in the United States 1990", Drug Enforcement Administration, Office of Intelligence, September 1991, p. 13.

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