# Drug Prospectus

## HEROIN: Availability and Trafficking in Maryland



Maryland State Police
Criminal Intelligence Division
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# 1991 HEROIN ASSESSMENT

## THE OPIUM POPPY

The opium poppy plant (papaver somniferum) is an annual that grows 3 - 4 ft. high and produces a 4 - 5 in. white to pink or red to purple flower. Many varieties of poppies are grown for their flowers, but the opium poppy's petals drop too quickly after cutting to be used for display. Papaver somniferum is cultivated in dozens of varieties and thrives in moderate to high temperature climates.

The primary chemical by-products of the opium poppy are a number of alkaloids that collectively constitute the drug opium. Further refining and processing of opium produces morphine which can be converted to heroin by acetylation.

When looking at the opium poppy, it is difficult to comprehend that this plant, innocent in its appearance, has the ability to relieve mankind's most severe physical pain but at the same time, enslave men to an addiction that reduces them to a sub-human existence.

"The nation's top drug law enforcers made it official at a House Narcotics Committee hearing June 9, 1992--heroin has reemerged as a major trafficking and abuse threat not only in the United States, but around the world."[1] Recent developments in supply, marketing, and use of heroin reveal that the drug may be on the way to regaining its status as the number one problem drug in the United States.

## OPIUM IN HISTORY

Opium use has been traced back to Middle Eastern regions thousands of years before the birth of Christ. Greek doctors were first reported to have used opium for medicinal purposes as early as 400 B.C.. By the 9th century A.D., China and Persia (presently Iran) were exposed to opium. India began exporting opium as a principal crop in the early 1500's.

Opium was smoked in China in the 17th century and its use eventually led to the Opium Wars fought with the British between 1840 and 1842. The emperor in Peking had forbidden opium use as a trade item because it was draining the country of silver. To avoid the emperor's edict, the British East India Company placed ships with opium stores outside Chinese jurisdiction. The emperor

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[1] Feldkamp, Robert H., Heroin Trafficking and Abuse up Sharply Worldwide as Prices Drop, Production Soars, Crime Control Digest, Vol. 26, No. 25, June 22, 1992, P.1

countered by taking the merchants hostage and destroying their opium. In response, the British sent warships to China. The Chinese were defeated which resulted in the Treaty of Nanking in 1842 and the succession of Hong Kong to British rule.

During the late 1700's in the United States, crude opium dissolved in alcohol or other liquids was regarded as a source of pain relief and treatment for a variety of ailments. Habitual opiate use was recognized as a problem in the early 1800's. The American Dispensatory of 1818 noted that the habitual use of opium could lead to "tremors, paralysis, stupidity, and general emaciation."[2] Unfortunately, these observations were tempered by claims that the drug had extraordinary medicinal value.

Opium's principal component, morphine, was isolated in the early 1800's. Heroin, a semi-synthetic drug, produced by acetylation of morphine, was first reported in 1874. In 1898, the product name "Heroin" was coined in Germany by the Bayer Company who produced the drug in syrup form as a cure for coughs. Eventually, heroin was touted as a cure for virtually every ailment including morphine addiction.

In the late 19th century, some states enacted laws limiting morphine distribution to physicians, but importation of smoking opium was not outlawed until 1909. Crude opium and its derivatives were not restricted until 1915.

Currently, in the United States, opium derivatives are used for legitimate medicinal purposes. Over 400 tons of opiates per year are legally imported to the United States and converted into morphine, codeine and other medicinal drugs.

## OPIUM PRODUCTION

Opium alkaloids are produced naturally within the seedpod of the poppy. There are two basic methods employed in removing those alkaloids. One of these methods is an ancient process from which most of the illegal opium is still produced today. The unripe poppy seedpod is scored by hand with horizontal incisions so the milky fluid containing the alkaloids seeps out. It is then allowed to air dry and form into a sticky substance known as opium gum. The gum is then scraped off the pod by farmers or local peasants. This procedure may be repeated up to five times to the same pod to get every drop of opium gum that remains.

The modern industrialized method, is known as the "poppy straw" process. In the poppy straw process the seed pod is allowed to dry on the stem. It is then snapped off the plant and the

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[2] David F. Musto, Opium, Cocaine and Marijuana in American History, Scientific American, July 1991, p.40

alkaloids are extracted from the dried pod in a complex industrial procedure resulting in poppy straw concentrate. Most poppy straw concentrate production facilities are under governmental control. These businesses are the origin for a large portion of the legitimate opium used around the world. The "poppy straw" method has found favor with farmers because the seeds can be pressed for oil used in cooking, and the residue fed to cattle. Poppy seeds that are left over from the process also can be sold on international spice markets.

## INTERNATIONAL OPIUM/HEROIN SOURCES

A number countries grow the opium poppy, but three areas are regarded as major producers of illicit opium: The Golden Triangle, (Burma, Thailand, Laos); The Golden Crescent, (Afghanistan, Pakistan, Iran) and Mexico. In addition to cultivation, some of these major producers also facilitate trafficking and processing.

### SOUTHEAST ASIA (THE GOLDEN TRIANGLE)

Production estimates for opium from the International Narcotics Strategy Report, March 1992 published by the United States Department of State, Bureau of International Narcotics Matters reveal that opium production in Southeast Asia increased significantly between 1988 and 1989. Decreases in 1990 production were caused by heavy rains in Burma that damaged the opium crop. Good weather in 1991 resulted in an increase over the 1990 yields. Production for 1992 is projected to stay near recent high levels.

| Southeast Asian Opium Production Estimates (metric tons) | | | | |
|---|---|---|---|---|
| 1988 | 1989 | 1990 | 1991 | 1992 est. |
| 1,568 | 2,855 | 2,565 | 2,650 | 2,532 |

Burma stands out as the leading opium producing country in both Southeast Asia and the world. Production of opium in Burma is allowed to go unchecked because of governmental instability and lack of control over areas that produce and transport the drug.

The DEA's Domestic Monitor Program (DMP) samples heroin seizures and purchases. This classification is based on the manufacturing process that is typically used in an area. In 1985, Southeast Asian heroin processing comprised only 14% of the DMP's random purchase and seizure samples. Results of the DMP in 1990 reveal that Southeast Asian heroin processing comprised 56% of the samples. The significance of the increased production estimates and identification of the origin of the DMP's samples is that it confirms Southeast Asian heroin as the heroin of choice in the

United States. The DMP Report for 1991 reveals that of 29 samples of heroin submitted for analysis from the Washington D.C. area, 21 were processed by the Southeast Asian method.

Heroin produced in Southeast Asia is brought to the United States by traffickers who employ a number of changing methods to escape detection. After opium is refined into heroin by Southeast Asian producers or facilitating border countries, any one of a number of trafficking organizations transport the final product to the United States. Southeast Asian heroin trafficking is dominated by Chinese or Sino-Thai groups. These tightly knit groups also control the wholesale distribution markets in New York City. West Africans have become increasingly active in smuggling heroin into the United States. Nigeria, and other West African countries have been identified as transhipment points for Southeast Asian heroin destined for the United States. Nigerian authorities have taken steps to counteract heroin smuggling into Nigeria by requiring government clearance for Nigerians that travel to Thailand. There are plans to expand that requirement to other countries where heroin is produced and trafficked.

## SOUTHWEST ASIA (THE GOLDEN CRESCENT)

According to the International Narcotics Control Strategy Report, March 1992, Southwest Asian opium production increased in 1991 and is expected to remain at the same level in 1992.

| Southwest Asian Opium Production Estimates (metric tons) | | | | |
|---|---|---|---|---|
| 1988 | 1989 | 1990 | 1991 | 1992 est. |
| 1,255 | 1,015 | 880 | 1,050 | 1,025 |

The major producer in Southwest Asia is Afghanistan which in 1991 was reported to be responsible for approximately 54% of the Golden Crescent's production. Iran follows with approximately 29%.

The DEA's Domestic Monitor Program did not include Baltimore in 1991, but of 29 Washington DC samples, 5 were manufactured in the Southwest Asian processing method.

India is a primary transshipment point for heroin from Afghanistan, Burma, and Pakistan. Europe is a major consumer of Southwest Asian heroin. One of the primary routes used to transport opium and heroin to Europe is known as the Balkan Route. The Balkan Route is a mountainous overland trail that uses Turkey as a bridge between Southwest Asia and Europe.

A number of ethnic groups are involved in smuggling Southwest Asian heroin into the United States including: Afghans, Albanians,

Iranians, Israelis, Lebanese, and Turks. These groups smuggle heroin to both the east and west coast of the United States and Canada. It is suspected that Canada serves as a transshipment point for some of the heroin destined for the United States.

## MEXICO

Opium poppies are grown in a number of Mexican states including Durango, Sinaloa, Sonora, and Guerreo. The drug is processed and smuggled into the United States by migrant workers or illegal immigrants with production and distribution being controlled by Mexicans and Mexican Americans.

Mexican opium production peaked at 66 metric tons and was estimated to have decreased 55 tons in 1991. Mexican opium production is modest by comparison to Southeast and Southwest Asian countries, but it represents a significant threat because of the country's proximity to the U.S. border. In the early 1980's, black tar heroin was virtually unknown in the United States, but is now considered to be available in 27 of the 50 states.

## INTERNATIONAL TRAFFICKING CONCERNS

A recent development that needs to be closely monitored is the report that cocaine cartels are switching to opium production and building heroin laboratories in South America. In 1989, approximately 500 acres of opium poppies were eradicated. Since then as many as 4,000 additional acres were eradicated in the Huila province in Colombia and several processing laboratories were discovered. The Colombian heroin that has been seized is about 90% pure, rivaling Southeast Asian quality. Although heroin is more difficult and expensive to manufacture than cocaine, a kilogram of heroin will sell for $70,000 to $250,000 compared to a kilogram of cocaine at $13,000 to $40,000. It is reasonable to assume that since cartel members are aware that their cocaine market is static or diminishing, heroin production may present an opportunity to restore lost revenues. Since the cartels already possess the infrastructure to process and deliver cocaine, their only requirement is for raw opium to begin heroin production. Whether they will continue to attempt to cultivate poppies or enter into deals with opium producing countries remains to be seen.

"There are grounds for concern as to whether the cultivation of the opium poppy may be developing in Africa. Several attempts at such cultivation have been identified, particularly in Egypt, Kenya, Morocco, and Sudan. A seizure in Cameroon of high purity opium may lend credence to this assumption."[3]

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[3] Report of the International Narcotics Control Board for 1991, United Nations, New York, 1991, p.20

## HEROIN TRAFFICKING IN MARYLAND

The DEA, U.S. Customs, and the Baltimore City Police Department have identified Baltimore's primary heroin trafficking group as being of West African origin. Little is known about the structures or internal workings of these trafficking organizations, but arrests and seizures have revealed some information. It is suspected that deals for pure heroin are brokered in Southeast Asia, and to a lesser degree, Southwest Asia. The heroin is then taken to Nigeria or other West African countries that serve as transhipment points. Couriers bring the pure heroin into New York through airports by two main methods, internal body carries and false-bottomed luggage. Internal body carries involve swallowing condoms or similar packaging that contain the pure heroin. Over one pound can be held in the body for 24-35 hours (more than enough time for transatlantic flights). Recently, smugglers have tried unusual techniques, including concealing the heroin in various products that were manifested as checked baggage. After reaching New York, the heroin is turned over to a contact. It is suspected that the international courier is then paid and his part in the network's operation ceases.

Pure heroin is brought to Maryland by automobile, private plane, containerized freight, bus, train, U.S. Mail, or other legitimate delivery services. The Maryland State Police and the Baltimore City Police Department have conducted interdiction efforts at train stations in the state and have had significant seizures from passengers arriving from New York. When the heroin reaches Maryland, it is either prepackaged for sale or taken to a cutting house to be prepared for street distribution. At some point, after the heroin is brought into Baltimore, distribution takes place by African-Americans and African-American organizations.

Some heroin is being brought directly to Maryland from transhipment countries. In February, 1992, Baltimore-Washington International Airport was the scene of the largest seizure of heroin in the airport's history. A passenger on a flight that originated from Sierre Leone in West Africa was arrested with 5.4 lbs. of heroin.

## PHARMACOLOGICAL EFFECTS OF HEROIN

Chemically, there are approximately 25 alkaloids that can be extracted from opium. Of those alkaloids, the principal constituent is morphine, which ranges in concentration from 4 to 21 percent. Morphine is one of the most effective drugs known to man for the relief of pain. Codeine, a common ingredient in cold medicines occurs naturally in opium, but is usually produced directly from morphine. Although illicit morphine, codeine, and opium are trafficked in the United States, the principle drug that

concerns law enforcement is heroin.

In 1975, researchers discovered how heroin was able to create a euphoria that has been described as being similar to sexual orgasm. Heroin produced the effect by mimicking bits of protein in the brain and central nervous system that regulate pleasure, pain and emotion. That euphoria experienced by the heroin user is what makes him return to the drug again. In addition to the pleasurable effects, the heroin user experiences drowsiness (often referred to as "the nod" and loss of appetite. Vomiting and nausea commonly occur after injection, but the exhilarating wave of pleasure or "rush" more than compensates for the discomfort. The depressant qualities of heroin slow many bodily functions. The heart, and respiratory systems slow and intestinal motions retard. Over a period of steady use these physiological effects gradually lessen if the same dosage is administered. In order to recapture the same feeling the dosage amount is increased. This phenomenon is known as tolerance and signals the beginning of physical dependence and addiction.

At some point, the body cannot be supplied with what it needs and an adjustment process begins. This adjustment (withdrawal) is extremely unpleasant. The level of discomfort rises with the degree to which the user's habit has been established and the amount of time that the body's cravings aren't satisfied. There are many flu-like withdrawal symptoms, including: fever, nausea, watery eyes, runny noses, muscle cramps and spasms, but withdrawal is rarely fatal. Symptoms peak 48-72 hours after withdrawal begins and can last for up to ten days. Even after the physiological cravings subside, the user must fight the psychological addiction. Memory of the euphoria brings the addict back to the thought that if he has just one more fix he will never need the drug again. Unfortunately, this is often the beginning of a whole new cycle of physiological addiction.

## ROUTES OF ADMINISTRATION

Heroin comes in various forms and colors depending on its origin and processing. Heroin from Southeast Asia, is typically a high quality, fine white powder that can be employed in any of the users preferred methods. It can also range from tan to off-white in lower purity grades that can be smoked or injected. Southwest Asian heroin can range from a highly refined, pure white heroin to a less refined tan colored heroin. Mexican heroin is produced by techniques developed by Mexican chemists and is typically in hydrochloride salt form. The powder usually varies in shades of brown and is typically low in purity. Mexico also produces black tar heroin, a sticky tarlike or hard substance with purity levels in the 60 to 70% range.

Pure heroin is diluted or "cut" with various ingredients or combinations of ingredients which increase volume and lessen

purity. These cutting agents are divided into two categories; adulterants and diluents. Pharmacologically active substances that are added or remain from processing are referred to as adulterants. Quinine is the most common adulterant used in the Baltimore area for intravenous use. One adulterant that occasionally appears in heroin is acetaminophen, a bitter analgesic. A common way for the heroin user to assess the quality of heroin is to taste it. It is suspected that the acetaminophen is added to deceive the buyer into thinking he is purchasing higher quality heroin. Diluents, also used as cutting agents are pharmacologically inactive substances. Some of the more popular diluents are mannitol, lactose, dextrose, and starch. Diluents work well with snorting quality heroin because it can be used dry and does not irritate the nasal membranes.

Purity of heroin and user preference effect the way heroin is administered. Heroin can be taken orally, but most would be destroyed in the liver before the desired effect took place.

The most common method for heroin use is intravenous injection, also called "mainlining". Heroin is usually purchased at street level in a prepackaged quantity. The user dissolves the heroin in water with the aid of a heat source. Using a hypodermic syringe the heroin solution is injected into a vein. The effect or "rush" is almost immediate and more intense than any of the other administration methods.

Subcutaneous injection or "skin-popping" is a less common usage method employing the hypodermic syringe. The heroin is injected just below the skin. Because this method is less direct than mainlining, it takes longer to achieve the "high" and its effects are less intense.

Snorting heroin, an activity that in the past was performed by the novice or occasional user is experiencing a surge in popularity in some cities. This method requires little or no paraphernalia. It can be inhaled directly into the nasal passages from a glassine bag or by using a straw in a method similar to snorting lines of cocaine. The absorption process is less direct than intravenous use so higher purities are required to achieve the desired effect.

One method that has gained in popularity in recent years is to burn small amounts of heroin on foil and inhale the smoke that rises. This is referred to as "chasing the dragon" and requires a higher purities. Heroin can be smoked, but purity levels have to be high to gain the desired effect. In Europe, opium base, manufactured specifically for smoking is popular, but this trend has not reached the United States at this time.

According to the 1991 Trends And Pattern in Alcohol Abuse produced by the Maryland Alcohol and Drug Abuse Administration, 15.7% of the people in drug treatment reported abusing two or more

drugs (not including alcohol). The most common drug use practice that employs heroin and another drug in Maryland is speedballing. Speedballs are injections that combine heroin with cocaine or methamphetamine. Another variation is injections that combine heroin and barbiturates, called "goofballs". Smoking heroin in a marijuana joint is called "atom bomb". Heroin smoked with crack is known as "parachute", "50-50", or "moonrock". There are reported to be several methods of making moonrock. The basic difference being whether the heroin is added to the cocaine before or after it is converted into crack. In cases where crack and heroin are involved, it is suspected that the heroin serves as a buffer to lessen the "crash" that results from the shortlived crack cocaine high.

Routes of administration other than injection initially protect the user from HIV infection. However, the nature of heroin addiction and increased tolerance entice the user to begin injection, the most effective method of administration. The novice user may also reason that by using methods that do not include injection, the chances of becoming addicted are reduced. These methods require the use of a higher purity heroin, therefore, the percentage of drug that reaches the bloodstream is nearly the same as in intravenous use.

## DEMAND

Accurate estimates for the number of addicts in the United States are not available in general or in specific metropolitan areas, although it is assumed that a large addict population exists in New York City. The National Institute of Drug Abuse estimates that in 1991, almost 700,000 people used heroin at least once during the year.[4] Maryland is estimated to have 35,000 to 50,000 heroin addicts located primarily in Baltimore City.

Data received from the Maryland Alcohol and Drug Abuse Administration on people seeking admission to treatment programs reveal that changes are occurring in administration methods.

**Alcohol and Drug Abuse Administration**

**Routes of Administration for Heroin**

| | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|
| Intravenous | 86.2% | 81.0% | 72.8% | 70.4% |
| Inhalation | 12.0% | 16.3% | 23.9% | 26.2% |
| Other | 1.8% | 2.6% | 3.3% | 3.4% |

The percentage of people seeking treatment that report inhalation as their route of administration more than doubled between 1988 and 1991. Although the increase in "other" methods is small, it has nearly doubled.

Analysis of data by the Maryland Department of Health and Mental Hygiene revealed that the heroin inhaler tends to be a younger, less experienced addict. Half of the inhaling admissions were for those under 26 years of age, and about three-fourths were 30 or younger. In addition, 17% of the multiple episode clients (clients seeking treatment more than once in a fiscal year) were inhalers who switched to injection, while only 3% of injectors became inhalers. Inhaling heroin has the advantage of requiring little or no paraphernalia, and doesn't carry the stigma or dangers of needle use.

New York City reports the same rapid increases in incidents of heroin inhalation. As the center of the heroin trade, New York City sees substantially higher heroin purities that can accommodate those users who want to inhale the drug. Statistics from the New

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[4]Worldwide Heroin Situation 1991, United States Department of Justice, Office of Intelligence and Heroin Investigations Section, June 1992, p.1

York State Division on Substance Abuse show that in 1986, less than 15% of the heroin addicts entering treatment had been inhalers. In 1990, over 30% of those addicts treated were inhaling heroin. The New Jersey Division of Alcoholism, Drug Abuse and Addiction Services reported similar statistics.

## DRUG USE FORECASTING

The Drug Use Forecasting survey (DUF) conducted by the National Institute of Justice is designed to estimate drug use among arrestees. In participating cities, arrestees voluntarily submit samples for urinalysis. Washington D.C. began its participation in DUF in 1989 and is the closest participating study area to Maryland.

| Drug Use Forecasting (DUF) | | | |
|---|---|---|---|
| Washington D.C. Arrestees Testing Positive for Opiates | | | |
| | 1989 | 1990 | 1991 est.* |
| Male | 12% | 13% | 12% |
| Female | 25% | 19% | 17% |

* Statistics are estimated through the first three quarters for 1991.

DUF statistics over the past three years indicate a decline in arrestees testing positive for opiates.

## EMERGENCY ROOM MENTIONS

The Drug Abuse Warning Network (DAWN) is an indicator of use and availability. DAWN collects drug mentions from area hospitals emergency rooms and weights the entries to be representative of the entire area. Baltimore metropolitan area statistics for weighted heroin/morphine mentions are as follows:

| Baltimore Metro Area Heroin/Morphine E.R. Episodes | | | |
|---|---|---|---|
| 1988 | 1989 | 1990 | 1991* |
| 1,100 | 1,089 | 1,667 | 3,922 |

* provisional estimate

Nationally, DAWN heroin/morphine entries were down an average of 18.7% between 1989 and 1990. Using provisional estimates, it appears that there will be a 10% increase between 1990 and 1991.

During the same 1989-1990 time period that the national figures dropped, Baltimore experienced an extraordinary increase in weighted emergency room mentions for heroin/morphine with an increase of 53.1%. If provisional estimates are correct the increase between 1990 and 1991 could be as much as 135%.

## HEROIN RELATED DEATHS

Maryland's Office of the Chief Medical Examiner tracks deaths related to heroin/morphine and morphine and other drug combinations.

| Office of the Chief Medical Examiner | | | | | |
|---|---|---|---|---|---|
| Heroin/Morphine Related Deaths In Maryland* | | | | | |
| Drug | 1986 | 1987 | 1988 | 1989 City/Co | 1990 City/Co |
| Morph/Heroin | 88 | 134 | 244 | 132/56 | 103/36 |
| Morph/cocaine | - | - | - | 36/8 | 4/2 |
| Morph & PCP | - | - | - | 1/1 | - |
| Total Deaths | 88 | 134 | 244 | 234 | 145 |

* 1989 was the first year that deaths were broken out by city and county

Deaths from morphine/heroin and other opiate combinations peaked in 1988 and 1989 then dramatically decreased in 1990. There is no obvious reason for this downturn. It is possible that the deaths in 1988 and 1989 were an aberration, and there was a return to more moderate numbers in 1990. National DAWN medical examiner mentions for heroin/morphine related deaths (excluding HIV related deaths) showed a 28.8% decrease between 1989 and 1990. Statistics for 1991 were not available.

## NATIONAL HIGH SCHOOL SENIORS SURVEY

The National High School Seniors Survey measures heroin prevalence among senior students in four categories. The two categories used in this assessment are:

** 30 Day --- Percent who used at least once in the last thirty days
** Annual --- Percent who used at least once in the last twelve months

| National High School Seniors Survey - Heroin Prevalence | | | | | | |
|---|---|---|---|---|---|---|
| **Prevalence** | **1986** | **1987** | **1988** | **1989** | **1990** | **1991** |
| **30 Day** | 0.2% | 0.2% | 0.2% | 0.3% | 0.2% | 0.2% |
| **Annual** | 0.5% | 0.5% | 0.5% | 0.6% | 0.5% | 0.4% |

Heroin use in the National High School Seniors Survey appear to be on a downward trend since 1989. Although heroin use is low among 12th graders, students who drop out before reaching that level are not accounted for. Also, because of the highly illicit nature of heroin and the stigma it carries, its use may be underreported.

## MARYLAND ADOLESCENT SURVEY

The 1990-1991 Maryland Adolescent Survey was used the same conditions as 30 day prevalence in the National High School Seniors Survey. Current heroin use as reported by high school seniors in Maryland was **1.6%**, *eight times* the **0.2%** for the comparable national statistic.

The National High School Senior Survey polls students who report having used heroin at least once in their life but have not used the drug within the last 12 months. Only methaqualone has a noncontinuation rate higher than heroin in the class of 1990.

| National High School Seniors Survey | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Noncontinuation Use for Heroin** | | | | | | | |
| **1983** | **1984** | **1985** | **1986** | **1987** | **1988** | **1989** | **1990** |
| 50.0% | 61.5% | 50.0% | 54.5% | 58.3% | 54.5% | 53.8% | 61.5% |

Heroin noncontinuation by students fluctuates over the last eight years and peaks in both 1984 and 1990. Again, over the

preceding five years, 1989 is the year that students were most likely to have continued heroin use.

## THE NATIONAL HOUSEHOLD SURVEY

Because of the nature of the National Household Survey on Drug Abuse, reported heroin usage among respondents was low. This survey does not poll those who are most likely to abuse heroin: transients, people living in institutions (e.g. correctional facilities), and people residing in noninstitutional group quarters (group homes and shelters). Asterisks (*) denote low precision - no estimate shown in the next three tables.

| National Household Survey<br>Current (past month) Heroin Use | | | | |
|---|---|---|---|---|
| | 1985 | 1988 | 1990 | 1991 |
| 12-17 years | * | 0.1% | * | 0.1% |
| 18-25 years | * | 0.1% | 0.1% | 0.1% |
| >26 years | * | * | * | * |

Current use figures for heroin were very low among respondents with most categories being low precision - to low estimate.

| National Household Survey<br>Annual (past year) Heroin Use | | | | |
|---|---|---|---|---|
| | 1985 | 1988 | 1990 | 1991 |
| 12-17 years | * | 0.4% | 0.6% | 0.2% |
| 18-25 years | 0.6% | 0.3% | 0.5% | 0.3% |
| >26 years | * | 0.3% | 0.1% | 0.4% |

Annual use figures point to 1990 as a peak year with a downturn in 1991 for the two younger age groups. The >26 age group was an exception rising .3%. This same trend has been seen throughout the nation with the drug use statistics for younger population dropping while use figures for the older population rise.

## ADULT ARRESTS FOR HEROIN (POSSESSION & DISTRIBUTION)

Yearly Baltimore City Police Department adult arrest figures for heroin are as follows:

| Baltimore Adult Arrests for Heroin | | | | | | |
|---|---|---|---|---|---|---|
| Year | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| Arrests | 2,417 | 3,195 | 3,815 | 4,756 | 4,659 | 4,435 |

Baltimore adult arrest figures for heroin increase from 1986 through 1989 then decrease slightly in 1990 and 1991. There are a number of possibilities for the decrease that may have no connection to trafficking problem. Budgetary constraints and staffing problems in law enforcement can result in decreased arrests. With the current crack cocaine problem, emphasis on law enforcement efforts may be shifted away from heroin. Another factor that affects adult arrest rates could be the drug organizations enlisting juveniles to work in positions previously held by adults. Juveniles involved in drug trafficking are normally treated as referrals to the Juvenile Services system.

## JUVENILE REFERRALS

The Maryland Department of Juvenile Services collects data on juvenile narcotics violators. Currently the capability to separate heroin-related referrals from other drugs does not exist. The statistics are available for the number of cases referred to the Baltimore City Intake Office for all drugs.

| Baltimore City Juvenile Referrals For All Drugs | | | | |
|---|---|---|---|---|
| 1987 | 1988 | 1989 | 1990 | 1991 |
| 895 | 1,042 | 1,109 | 1,329 | 1,356 |

Baltimore City referrals to Juvenile Services for all drugs steadily increased from 1987 to 1991. Although these figures cannot be directly related to any particular drug, the possibility exists that juveniles are taking drug distribution positions in heroin trafficking organizations that were previously held by adults.

## HEROIN AVAILABILITY AND TRAFFICKING INDICATORS

There are a number of indicators used in this report to determine the availability and trafficking of heroin in Maryland, these include: interdiction data, state and federal price and purity reports, surveys and new trafficking trends from New York City.

### HIGHWAY INTERDICTIONS

Maryland State Police (MSP) highway interdiction efforts have resulted in increased seizures for heroin over the last four years.

| Maryland State Police | | | |
|---|---|---|---|
| Highway Interdictions/Seizures for Heroin | | | |
| 1988 | 1989 | 1990 | 1991 |
| 81.2 gms | 98.0 gms | 296.6 gms | 337.1 gms |

The "hit or miss" nature of random interdiction stops make it hard to draw firm conclusions about heroin trafficking in Maryland. Heroin interdiction is difficult because it can be moved in smaller quantities before it is "cut". So far, in the first half of 1992, 1,748 grams have been seized, illustrating how interdiction efforts can be skewed by a single seizure.

### TRAIN,BUS AND AIRPORT INTERDICTIONS

In addition to interdiction efforts by U.S. Customs, the Drug Enforcement Division of the Maryland State Police has employed an interdiction team at BWI Airport in Anne Arundel County. In June, 1991, the MSP initiated interdiction efforts at the New Carrollton Amtrak Station in Prince George's County. By February, 1992, that team had seized 26 ounces of heroin with an estimated street value of over $1,000,000.

### D.E.C.S. HEROIN ENTRIES

The Drug Enforcement Coordinating System (DECS) maintained by the Maryland State Police can provide information about trafficking/distribution of heroin investigations by law enforcement in the State of Maryland. DECS data is taken from drug investigations submitted between October 1990 and September 1991 by participating law enforcement agencies throughout Maryland. When a law enforcement official begins an investigation, names and demographic information on suspects are submitted to DECS. The primary purpose is to determine if a suspect is being investigated

by another agency. A secondary benefit is the intelligence information that can be derived from DECS data. Since investigations normally focus on trafficking above street level, DECS can be useful in constructing demographic data about the heroin trafficker/dealer.

In Baltimore, the second most frequently investigated drug was heroin, comprising 30.4% of all drug investigations reported to DECS. The majority of these entries originated from the DEA Baltimore office. Cocaine HCL is the most frequently investigated drug in Baltimore City and the counties surrounding Washington DC.

DECS investigations for heroin were almost entirely submitted by the Baltimore Office of the DEA and the Baltimore City Police Department. In Baltimore City, heroin investigations are spread throughout age groupings with 22.2% in the 18-24 year of age (yoa) category, 30.2% in the 25-29 (yoa) category and 39.9% in the 30-44 (yoa) category. Heroin investigations in DECS are almost exclusively African Americans. DECS's heroin investigations by sex show a male to female ratio of almost 4 : 1.

## HEROIN PRICE AND PURITY

DEA tracks national heroin prices in kilogram quantities by the originating region (Southeast Asian-SEA, Southwest Asian-SWA, Mexican-MEX). The following prices were taken from the DEA's Illegal Drug Price/Purity Report.

| Drug Enforcement Heroin Prices by Region (kilogram) | | | |
|---|---|---|---|
| | 1989 | 1990 | 1991 |
| SEA | $60,000-$204,000 | $70,000-$260,000 | $90,000-$260,000 |
| SWA | $45,000-$160,000 | $70,000-200,000 | $80,000-$220,000 |
| MEX | $70,000-$130,000 | $65,000-$180,000 | $50,000-$200,000 |

DEA also tracks national heroin prices in ounce and gram quantities.

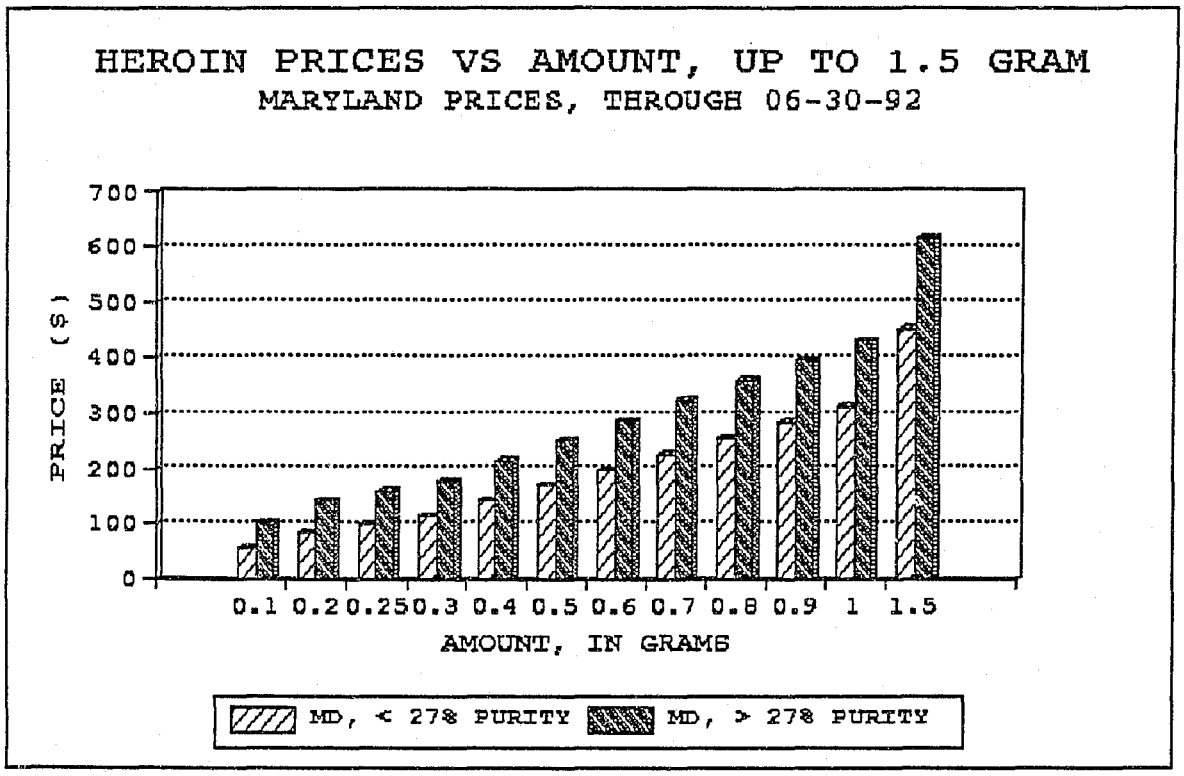
| Drug Enforcement Heroin Prices (ounce and gram) | | | |
|---|---|---|---|
| | 1989 | 1990 | 1991 |
| Ounce | $1,500-$10,000 | $1,000-$13,000 | $900-$14,000 |
| Gram | $80-$450 | $50-$450 | $40-$450* |

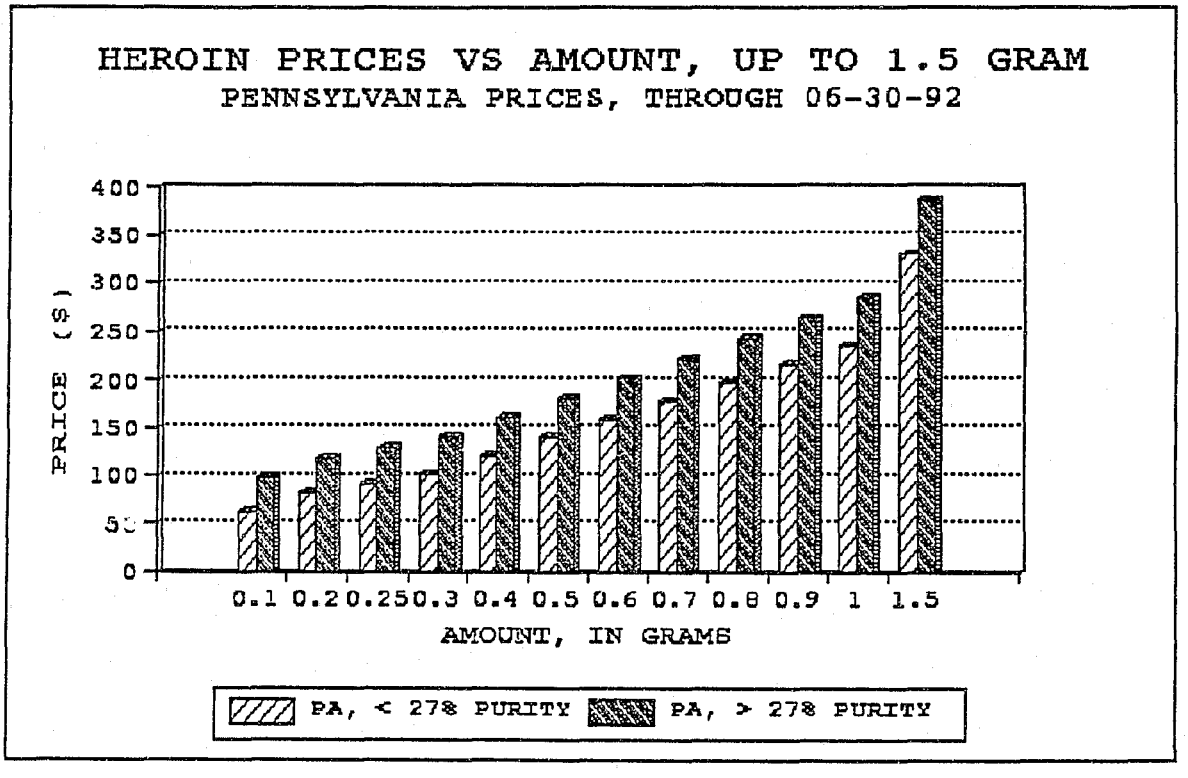
* Grams of purported SEA heroin in Hawaii have sold for as much as $800 each

The Maryland State Police Criminal Intelligence Division produces a study of heroin price and purity data in its 1992 Maryland State Police Price and Purity Assessment.

The following table from that report shows the purchase price for heroin in Maryland and Pennsylvania.

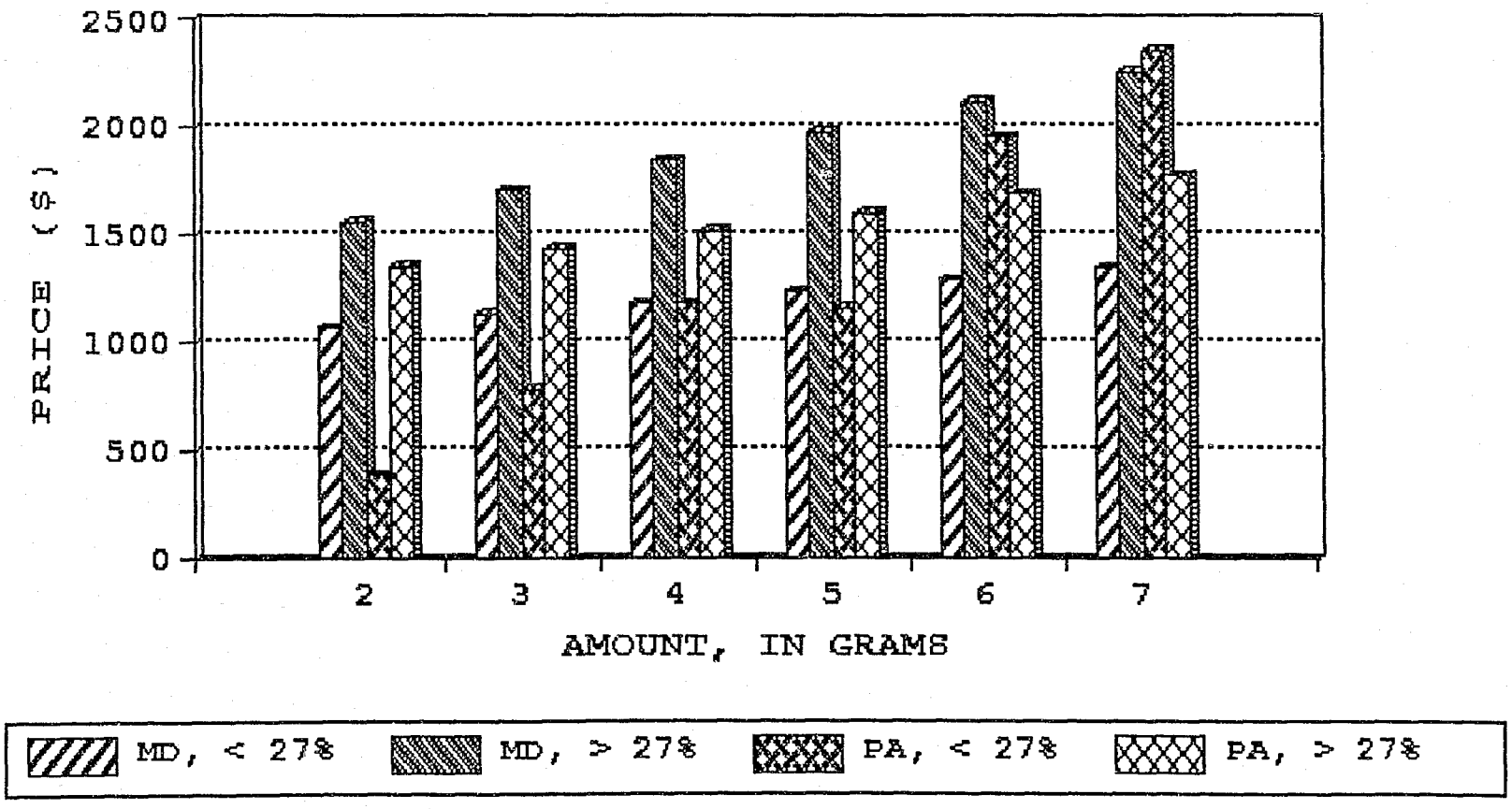
| Prices for Heroin Purchases 0.1 to 28 Grams For Low Purity and High Purity Purchases | | | | |
|---|---|---|---|---|
| | Maryland | | Pennsylvania | |
| | Purity | | Purity | |
| Amount, in Grams | Under 27 Percent | Over 27 Percent | Under 27 Percent | Over 27 Percent |
| 0.1 | 58 | 105 | 63 | 99 |
| 0.2 | 86 | 142 | 83 | 119 |
| 0.25 | 100 | 160 | 92 | 130 |
| 0.3 | 115 | 178 | 102 | 140 |
| 0.4 | 143 | 215 | 121 | 161 |
| 0.5 | 171 | 251 | 140 | 181 |
| 0.6 | 199 | 287 | 159 | 202 |
| 0.7 | 228 | 324 | 178 | 222 |
| 0.8 | 256 | 360 | 197 | 243 |
| 0.9 | 285 | 396 | 216 | 264 |
| 1.0 | 312 | 433 | 235 | 285 |
| 1.5 | 453 | 615 | 331 | 387 |
| 2.0 | 1075 | 1565 | 390 | 1350 |
| 3.0 | 1130 | 1705 | 780 | 1435 |
| 4.0 | 1180 | 1840 | 1175 | 1520 |
| 5.0 | 1235 | 1978 | 1160 | 1605 |
| 6.0 | 1290 | 2115 | 1960 | 1691 |
| 7.0 | 1345 | 2255 | 2355 | 1780 |
| 14.0 | 1720 | 3216 | N/A | 2375 |
| 28.0 | 2480 | 5140 | N/A | 3565 |


HEROIN PRICES VS AMOUNT, UP TO 1.5 GRAM
MARYLAND PRICES, THROUGH 06-30-92
PRICE ($)
700
600
500
400
300
200
100
0
0.1 0.2 0.25 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.5
AMOUNT, IN GRAMS
MD, < 27% PURITY
MD, > 27% PURITY


HEROIN PRICES VS AMOUNT, UP TO 1.5 GRAM
PENNSYLVANIA PRICES, THROUGH 06-30-92
PRICE ($)
400
350
300
250
200
150
100
0
0.1 0.2 0.25 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.5
AMOUNT, IN GRAMS
PA, < 27% PURITY
PA, > 27% PURITY

# HEROIN PRICES VS AMOUNT, 2 TO 7 GRAMS

MARYLAND& PENNSYLVANIA, THROUGH 6-30-92



## HEROIN PURITY BY COUNTY AND REGION

Twenty-seven percent purity was used as the dividing line between low and higher purity purchases since there is a natural break in the data at this point. There were no more than ten purchases at purities below 10 percent.

Purities were then compared by counties in Maryland and regions in the Pennsylvania and Virginia. Only the counties in Maryland that reported purities for heroin are shown.

| Heroin Purities, By County and Region 7-1-90 Through 6-30-92 | |
|---|---|
| **State or Region** | **Purity** |
| ***Maryland*** | ***38.8*** |
| Baltimore County | 33.3 |
| Cecil County | 46.1 |
| Montgomery County | 53.9 |
| Prince George's County | 38.6 |
| Worcester County | 67.3 |
| Baltimore City | 35.3 |
| ***Pennsylvania*** | ***47.7*** |
| Philadelphia | 48.2 |
| Pittsburgh | 42.1 |
| ***Virginia*** | ***57.7*** |
| Northern Virginia | 65.2 |
| Richmond | 43.8 |
| Norfolk | 57.9 |

A final comparison shows the purity of heroin by quarter, for Maryland, Pennsylvania and Virginia. Purities in Delaware are not shown, due to insufficient data.

| Heroin Purities, By Quarter For Maryland, Pennsylvania and Virginia 7-1-90 Through 3-31-92 | | | |
|---|---|---|---|
| Quarter | Maryland | Pennsylvania | Virginia |
| 7-90 to 9-90 | 15.3 | 44.4 | 63.7 |
| 10-90 to 12-90 | 43.9 | 43.2 | 52.6 |
| 1-91 to 3-91 | 46.6 | 49.3 | 70.8 |
| 4-91 to 6-91 | 34.0 | 48.6 | 48.9 |
| 7-91 to 9-91 | 42.9 | 46.2 | 59.2 |
| 10-91 to 12-91 | 38.3 | 48.9 | 44.1 |
| 1-92 to 3-92 | 51.6 | 61.5 | 51.4 |

## NEW YORK TRAFFICKING TRENDS

The New York Division of Substance Abuse Services Street Research Unit reports that although heroin purities have risen, prices have remained the same. This is thought to be primarily the result of competition between dealers. Competition for customers is also resulting in heroin sales overshadowing crack sales in some areas of New York City. Besides the increases in purity, new marketing techniques are being enlisted. Some of the marketing techniques include selling heroin in smaller quantities ($5 bags) and marketing different brand names for short periods of time in addition to those traditional brand names that have been used year after year.

Other anecdotal information from the report relates that heroin dealers in New York are avoiding the younger "crackheads" because of their propensity for violence. This endangers the heroin dealer and draws the unwanted attention of law enforcement. Although more of a sociological issue, another interesting heroin use observation from ethnographers in New York reveal that the heroin user no longer considers himself on the bottom of the drug user strata. That social position is now reserved for the crack users. It is not unusual for heroin addicts and crack addicts in New York to argue over whose drug habit is worse.

## Surveys

Although generally considered use indicators, some survey questions address subjects that are availability oriented. The National High School Seniors Survey polled students on the perceived availability of heroin. In 1991, 30.6% of the students felt that heroin was "fairly easy" or "easy" to obtain.

## Conclusions

### HEROIN DEMAND REVIEW

A review of highlights of demand and use indicators for heroin discussed in this assessment show mixed trends.

* Inhalation has doubled since 1988 as a usage method by Maryland heroin addicts seeking treatment.

* Inhalers tend to be younger. Half are 26 or under and about three-quarters are under 30.

* Trends indicate that the inhaler is much more likely to switch to intravenous use than the intravenous user switching to inhaling.

* Although less significant than the increase in inhalation, other methods of heroin use, such as smoking, have doubled since 1988.

* 1991 DUF statistics for Washington DC arrestees testing positive for opiates indicate declining use.

* DAWN Baltimore Metropolitan Emergency Room estimates for heroin/morphine have increased dramatically in 1991 and 1992.

* Maryland Chief Medical Examiner data reveal that heroin/morphine and other drug combinations increased each year between 1986 and 1988, leveled off in 1989, then dropped in 1990.

* Adult arrests for heroin in Baltimore City increased every year from 1985 to 1989 then dropped slightly in both 1990 and 1991.

* Juvenile arrests referrals for all drugs are up slightly in 1991 after large increases the previous three years.

* The National High School Senior Survey for heroin prevalence indicates that 1989 was a peak year in most categories and that there appears to be a general downtrend with the exception of the category 30 Day (used once in the last 30 days)

* The Maryland Adolescent Survey 30 day prevalence for heroin use by high school seniors was 1.6% which is 700% higher than the National High School Seniors Survey for the same statistic.

* Noncontinuation of heroin use in the National High School Seniors Survey in 1990 peaked at a high in of 61.5% after fluctuating over the previous eight years.

## AVAILABILITY/TRAFFICKING INDICATORS REVIEW

These highlights are taken from the availability\trafficking section of this assessment.

* Southeast and Southwest Asian opium production is near previous peak levels.

* South American cartels are attempting to grow opium poppies and manufacture heroin.

* Street level purity of heroin in Baltimore is rising dramatically past historical levels.

* Washington DC, a supplier city to contiguous Maryland counties and counties in Southern Maryland is experiencing rising purities and falling prices for heroin.

* Highway interdictions for heroin by the Maryland State Police have risen every year since 1988.

* DECS entries reveal heroin is the 2nd most investigated drug in Baltimore City.

* Although anecdotal, there have been major seizures of heroin at BWI airport by U.S. Customs, and the AMTRAK station in New Carrollton, Prince George's County by the Maryland State Police.

* Perceived availability in the National High School Survey dropped off slightly in 1991 but 30.6% of students feel that heroin is "fairly easy" or "very easy" for them to get.

### Trend Indicators from New York

Historically, Baltimore lags behind drug trends in New York and this appears to be consistent with the surge in high purity heroin seen recently. The following is a review of recent trends in New York:

* New York reports that heroin is exceeding crack sales in some areas and that some dealers are switching from crack to heroin sales.

* Marketing techniques for heroin are changing in New York: smaller quantities available, and brand names changed frequently.

* High purities in New York may be a marketing approach to maintain diminishing markets against competition.

* High purities may be used to lure the crack user to heroin.

* High purities in New York may be the result of dealers trying to expand the heroin market to include new costumers that will begin use as inhalers.

* Heroin dealers in New York are avoiding the younger "crackheads" because of their propensity for violence and the attention it draws from law enforcement.

## FORECAST

Forecasting 1992 heroin demand and trafficking trends in Maryland is difficult because of weaknesses and contradictions in the available indicators.

It appears that there is a virtually limitless supply of opium available for heroin production at this time. This is evidenced by increased opium production in source countries, increased heroin seizures by law enforcement, and rising heroin purities without commensurate price increases. Additional anecdotal information reveals that dealers in New York, Maryland's primary supplier, have had to resort to new marketing techniques to sell their product.

Usage has declined among high school students and young adults, but the segment of that market that uses heroin is not likely to be reached through surveys and other conventional means. Older adult use appears to be increasing slightly. Heroin users over thirty years of age represent 65.4% of the emergency room mentions for the Baltimore area. Emergency room mentions are one of the more reliable indicators of use. Statistics from 1991 and provisional emergency room mentions statistics indicate an emerging problem. Either use is up, or the higher purity heroin is placing more people in hospital emergency rooms. At the same time, DUF statistics, one of the only other indicators that is likely to reach the heroin using culture indicates a slight downturn in use.

The unknown in the current situation is whether new markets can be developed by traffickers. Under previous circumstances, indications of declining use and intense competition between dealers would be a plus, but with usage methods undergoing rapid change, it is difficult to be optimistic. As the risks associated with intravenous use and deaths attributed to cocaine use continue to be a concern to drug users, heroin traffickers can exploit this situation in developing new markets for their product. This factor, along with a shrinking cocaine market, larger profit

margins, and a drug that creates long term users may explain efforts by the Colombian cocaine cartels and others to enter the opium production and heroin processing business.

Higher purities create a major logistic problem for the trafficker. Even if markets do not expand, larger quantities of heroin will be moved because higher purities are being consumed. This will increase vulnerability to interdiction and other law enforcement efforts. It is not likely that the high level trafficker will be deterred, because the reward substantially exceeds the risks. Subsistence level dealers who are feeding their own habits with the profits from their sales are not likely to find other alternatives to dealing heroin.

The heroin trafficker has the resources to supply any new surge in user demand and may be attempting to create new markets for his product. Although it would appear at this time that there has been limited success recruiting new users, the threat of a large scale heroin problem in Maryland remains and should be addressed accordingly.

State of Maryland
William Donald Schaefer, Governor
Melvin A. Steinberg, Lt. Governor

Department of Public Safety
and Correctional Services
Bishop L. Robinson, Secretary