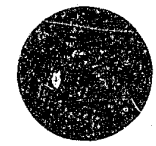

# Heroin Situation Assessment

A Report Prepared for
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BOTEC Analysis
CORPORATION

# Heroin Situation Assessment

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# Executive Summary

There is concern and controversy about the possibility that the United States is in the formative stages of a "new heroin epidemic." In recent years, heroin seizures have risen, purity levels have soared, and prices have plummeted—trends one would expect to accompany a surge in heroin supply.

At first blush, other inferences could be drawn from this evidence. Rising seizures could be the product of better interdiction, and falling prices the consequence of shrinking demand (perhaps from mortality and fears of IV drug use stemming from the AIDS epidemic).

While it is conceivable that these explanations are accurate, there is reason to believe otherwise. In terms of heroin prices, it does not seem that shrinking demand can explain their sudden drop. For one thing, despite the AIDS epidemic, indicators of use do not show clear signs of abating. With the exception of a sharp decline in 1990, heroin-related emergency room mentions and medical examiner reports have risen in every year since 1979. (Admittedly, these figures are influenced by trends in cocaine use.) Moreover, the 1991 National Household Survey on Drug Abuse reports increases in the percentage of respondents who have used heroin in the past year. And added to this are growing reports of new users who were previously crack addicts.

A more plausible account of the decline in heroin prices points to the influx of high-purity Southeast Asian heroin. From 1987 to 1988, heroin of Southeast Asian origin increased its U.S. market share from one quarter to roughly half. (This was no doubt connected to the boom in Southeast Asian opium production, which more than doubled from 1987 to 1989.) As the market was flooded with this high purity heroin (about 30 percent pure, much less diluted than heroin from Mexican or Southwest Asian sources), average purity levels quadrupled. Yet the retail price of heroin remained stable. As a result, the (purity-adjusted) price per pure milligram plunged. From 1979 to 1987, the average price per pure milligram hovered just above or at $2.00; in 1988, it fell to almost $0.50. It has since recovered some, to about $0.90. ($0.90 is lower, in inflation-adjusted terms, than prevailing prices at the beginning of the last great heroin epidemic, before the Turkish opium ban.)

The expansion in Southeast Asian supply also seems to account for much of the increase in heroin seizures. In 1987, DEA and U.S. Customs reported seizing a total of 1,443 pounds of heroin between them; in 1988, they reported seizing 3,192 pounds. While interdiction efforts have no doubt become more skilled, it is hard chalk up a doubling in seizures in a single year to better enforcement alone—especially given that the rise does not appear associated with a longer-term trend. The quantity of heroin seized declined in the two years preceding 1987, and was lower in 1990 than it was in 1988.

If U.S. heroin supply has indeed increased, has consumption risen as well? Or have increased imports been stashed away for later sale? It is hard to imagine that imports have been running consistently ahead of consumption, with the difference going to inventory-building within the heroin trade. This is plausible in overseas growing areas, where opium is cheap to produce and easy to store. But heroin inventories in the U.S. would tie up substantial amounts of money and expose traffickers to considerable risks of enforcement and theft.

Thus it is reasonable to conclude that heroin consumption has in fact been rising. The question, then, is how much of the additional supply of heroin is attributable to an increase in the number of users (by increasing rates of initiation and relapse from abstinence or by decreasing quit-attempt rates) and how much is attributable simply to an increase in consumption by existing users. The former set of effects is far more worrisome than the latter.

New users are a particular concern. Heroin use spreads primarily among friends and peers. New users, typically within their first year of use, are the most likely to turn on others; long-time users are the least likely. The implication of this is that new heroin use is susceptible to periods of explosive growth. If the number of new users rises, they initiate more new users, and so on. Low prices and high purities can create some of the supply-side preconditions for such an increase. Low prices reduce the economic barriers to experimentation, while high purities, by facilitating intranasal or inhaled rather than intravenous administration, reduce the barriers created by stigma and fear of infection.

The extent to which the threat of a self-sustaining increase in the number of new users is realized depends on the growth of retail distribution channels for heroin and on attitudes and dispositions among potential new heroin users. There are some reports of increasing street-level heroin sales activity, and the shrinking crack market will tend to create underemployed retail drug sellers available to handle a new product. There is no good source of data about attitudes and dispositions.

The strongest sign of a growing number of new users would be the entry of large numbers of younger users, with more recent dates of first use, into treatment. Also ominous would be widespread heroin smoking or snorting in lieu of injection among those showing up at jails and treatment centers. Some of these effects are indeed showing up. Among arrestees, for example, there are noticeable numbers of recent heroin users, although few of them are young and almost all of them have previous experience with cocaine. In some cities, including New York, Newark, and Chicago, one-third of current heroin treatment entrants report intranasal administration as their primary mode.

Currently accessible data does not allow one to come to any strong conclusion about current heroin initiations. Inaccuracy in some data sets is a problem, but the biggest weakness in the data is that it tends to overlook new users. The problem is especially prominent with respect to data on use and consequences. Tallies of emergency room and medical examiner mentions quantify only the most extreme levels of abuse, behavior not generally associated with new or casual users.

In fact, the low prices and high purities that characterize the present heroin environment could lead to temporary reductions in many abuse statistics, while at the same time enticing growing numbers of new users. For one thing, lower prices ease the financial pressure on addicts to commit crimes in order to support their habits. Hence, fewer heroin users may show up in arrestee surveys. And higher purities may bring about a fall in overdose numbers. Unintentional overdoses are related to the uncertainty in purity as much as its absolute level, and higher purity will tend to decrease, rather than increase, that uncertainty.

The long-term effects of low price and high purity are likely to be far less benign. While there is little evidence yet of rising heroin initiation rates among young users without prior hard-drug experience, low prices and high purities present the threat of an increase in the heroin-using population, with all that might mean for the future in terms of addiction, crime, and disease. The gravity of the threat suggests the need for more intensive monitoring efforts and for readiness to address the heroin problem as its shape continues to emerge.

# Introduction

There is controversy about whether the United States is in the incipient stages of what some have called "a new heroin epidemic." For the purposes of analysis, this question of whether a large upsurge in heroin trafficking and use (along with heroin-related damage) is on the horizon can be broken down into two components. First, what are the recent and current developments in heroin supply? In other words, what has happened and what is happening with respect to opium production, heroin imports, prices, purity levels, and retail availability? Second, when combined with factors on the demand side—such as the growing number of crack burnouts and AIDS-related fears of IV drug use—what are the likely effects of these changes in heroin supply in terms of the number heroin users, the quantity of heroin consumed, and the personal and social consequences of heroin use?

## Methodology

The balance of this report is comprised of two sections and two appendices. The first section examines currently accessible data concerning heroin availability, use, and abuse. The second section discusses and analyzes what this data indicates about the possibility of a coming heroin epidemic. Appendix A presents supporting tables and figures. Appendix B gives the interview questionnaire.

# Data

The information in this chapter is arranged into six sections. The first covers evidence on recent trends in heroin availability, and presents data on heroin prices, purity levels, and international sources. The second section looks at heroin supply from an interdiction perspective; data on heroin seizures is given. The third and fourth sections report data from the Drug Abuse Warning Network (DAWN) and the Drug Use Forecasting (DUF) system. The fifth section summarizes some of the observations and opinions of various enforcement and treatment personnel, gathered in a series of interviews conducted by BOTEC. The sixth and final section outlines additional evidence assembled from a variety of other sources.

All accompanying tables and figures are grouped together in Appendix A.

## Price, Purity, and Source

### *History of Heroin Prices and Supply*

The data discussed in this section is presented in Table 2 and Figure 1.

While heroin has been available on the streets of many American cities for several decades now, the supply has always been quite volatile. This volatility has manifested itself through marked changes in international sources (among Mexico, Southwest Asia, and Southeast Asia), prices, and purity.

Twenty years ago, much of the heroin sold in the U.S. came from Southwest Asia—primarily Turkey, but also Afghanistan, Iran, and Pakistan. Then, in the early 1970s, the combination of the Turkish Opium Ban and successful cases against the "French connection" disrupted this source. The result in the U.S., especially on the East coast, where heroin of Southwest Asian origin was predominant, was a period of shortage, marked by relatively high prices and reduced purity.

Mexican heroin, which already supplied West coast markets, began to fill the void. By the mid-1970s, Mexico was the source of roughly 90 percent of all heroin sold in the U.S. But this too

was a short-lived domination, as drought and successful crop eradication during the late 1970s shrank the Mexican supply. By the end of the decade, Mexican heroin accounted for less than 40 percent of U.S. supply. During this period, prices again increased substantially, while purity fell. The effects on use and abuse were noticeable, as both emergency room and medical examiner mentions relating to drug overdoses dropped precipitously.

These tight market conditions began to ease in middle of 1979 when Southwest Asia reemerged as a prominent source of heroin. According to DEA figures, heroin from this region accounted for a mere two percent of U.S. supply in 1977; by 1980 the figure was 51 percent.

Heroin supply has been plentiful ever since, although Southwest Asian sources have lost their market share to the steady spread of high purity heroin from Southeast Asia (the "Golden Triangle" of Burma, Laos and Thailand).

***Recent Developments***

The data discussed in this section is presented in Tables 1 and 2, and Figure 1.

At the beginning of the 1980s, Southwest Asian and Mexican heroin accounted for about 90 percent of U.S. supply. Regional variations were significant: Southwest Asian sources dominated East Coast markets, and Mexican heroin was more prevalent on the West Coast.

Southeast Asian heroin became widely available between 1982 and 1984, but it still represented only a small fraction of the total market. Moreover, by historical standards, the spread of Southeast Asian heroin was slow. It was not until 1986 that it accounted for more than 20 percent of samples tested by the Heroin Signature Program (HSP).

By 1987, high purity Southeast Asian heroin had arrived, although it seems to have been concentrated in the New York City area. Unfortunately, HSP data are weak for 1986 and 1987, so it is not easy to document precisely when the transition away from other sources occurred. But by 1988, Southeast Asian heroin dominated the U.S. market, comprising 46 percent of all HSP samples in that year. In 1989 and 1990, it comprised 56 percent.

Accompanying this shift in supply sources was a rise in average purity, a development which has not abated. Domestic Monitor Program (DMP) data indicate that Southeast Asian heroin has averaged about 30 percent purity for the period 1988-1990. (Note on Table 2 that Southeast Asian heroin was slightly less prevalent in DMP's testing than in HSP's.[0]) Despite considerable decreases from 1988 to 1990 in the purity of both Mexican and Southwest Asian

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[0] DMP figures, derived from retail DMP purchases in 19 cities, are published in quarterly reports. HSP figures are derived from a wider variety of sources, including wholesale and retail purchases, as well as seizures by DEA and other agencies. While more comprehensive than DMP, HSP data is less consistent in its sources, and is not published as regularly or promptly.

heroin, average purity for all sources has roughly quadrupled, from 6 percent to 24 percent, in the last five years.

The increasing purity levels were not accompanied by an increase in price, and so the *effective* price of heroin fell considerably. Prices per pure milligram at the retail level had been in the $1.15-$1.30 range in 1974-1976, before the collapse of Mexican supply. By 1979, the average price per pure milligram reached $2.25, and it remained between $2.13 and $2.34 until 1984. Between 1984 and 1987 average price declined to $2.00. Thus, even in nominal terms, the price per pure milligram had been fairly steady for almost ten years. But due to high purity levels, the price per pure gram has plummeted since then, falling, according to *DEA Office of Intelligence Reports*, to about $0.50-$0.60 in 1988 and 1989. In 1990, effective prices appeared to edge upward to about $0.90 per pure milligram.

The decline in effective retail prices seems to have followed a slightly earlier drop in wholesale prices. Using the midpoint of the price ranges reported by DEA for the three principal types of heroin, and weighting the fractions by their shares in the HSP samples, the average price for a kilogram fell from over $300,000 in 1982 to about $150,000 in 1985. But for a brief dip in 1989 (to about $120,000), it has remained at this level. Since kilogram level purities run about 70 percent, it follows that the price per pure milligram at this wholesale level is about $0.20.

Additional data—which was not discussed in this section—showing heroin prices, purities, and sources for nine major cities is presented in Table 3.[1]

## Seizures

The data discussed in this section is presented in Table 4.

The U.S. Customs Service seized about 400 shipments per year in 1975-1976. This fell to a low of about 150 shipments per year in 1980, but has rebounded since, averaging 400 to 500 shipments per year.

A marked increase, however, is observable in quantity seized as the average size of seizures has grown. After remaining stable at about 600-700 pounds per year between 1983 and 1987, it reached nearly 1,500 pounds in 1990.

DEA seizures show a similar trend. Unfortunately, it is impossible to determine how much of this is attributable to double-counting of Customs Service seizures. Especially in the case of large busts, it has been common for the Customs Service to transfer custody of drugs to DEA. The seizure is then counted by both organizations.

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[1] The price data is misleadingly high, since DMP reports a simple average of the price per pure milligram of its various purchases. As a result, the figures are skewed by a few very low purity (and thus very high price) buys.

Seizures reported by DEA averaged a little over 800 pounds per year from 1984 to 1987, and then jumped to 1,841 pounds in 1988. The figures were somewhat lower in 1989 and 1990, with quantities of 1,554 and 1,405 pounds respectively.

What is perhaps most striking about these numbers is the size of some recent seizures. Between 1980 and 1984, the three largest DEA heroin seizures were 116, 77, and 52 pounds. Yet between 1985 and 1989, there were 12 seizures of more than 52 pounds.[2] And in June 1991, the DEA recorded its largest bust ever, grabbing 1,080 pounds of "China White" just outside of San Francisco.

# DAWN

### *The Drug Abuse Warning Network (DAWN)*

DAWN is an ongoing system, administered by the National Institute on Drug Abuse (NIDA), that collects data on drug-abuse-related admissions to reporting hospital emergency rooms and drug-abuse-related deaths which are investigated by reporting medical examiners' offices.

### *DAWN Nationwide Data*

Data discussed in this section is presented in Tables 5 and 6, and Figures 2 and 3.

Until 1988 (and through the present with respect to medical examiner mentions), DAWN attempted to control for the unevenness of its sample by disclosing separate data for *consistently reporting units*, defined as those that have submitted records within the last six months and at least every six months during the period in question. Yet the longer the observed time period, the smaller the consistent panel. And combining different consistent panels may result in even more bias than if raw data had been used.

Unfortunately, there are a number of weaknesses with the DAWN data. Two stand out above all. The first is that the sample of participating emergency rooms and medical examiners is inconsistent over time. The second is the failure of DAWN reports to sort out the confounding effects of multiple drug use.

As a result of inconsistent sampling, it is difficult to draw inferences about trends, since variations may be the result of changes and biases in the DAWN sample, rather than any underlying shifts in drug consumption. DAWN has partially rectified this problem in the case of emergency room mentions; since 1988, DAWN has used statistical weighting procedures (to adjust for non-response) in deriving its nationwide estimates.

So rather than attempting to synthesize data from different consistent panel sets, we have chosen to show the trends from a variety of panels. Data and sources are given in Tables 5 and

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[2] *FY 1990 DEA Annual Statistical Report*, p. 81.

6. Using these data sets, Figures 2 and 3 plot medical examiner mentions for the period 1974 to 1989, and emergency room mentions for the period 1974 to 1990.

The envelope of these plots shows a clear pattern of substantial decline from 1975 to 1979, followed by a steady rise through 1989, and then a sharp drop in 1990 (although preliminary figures for the first two quarters of 1991 show an increase once again[3]).

The fall in heroin-related emergency room mentions in 1990 may underscore the problem of multiple drug use distorting trends in DAWN data. According to DAWN nationwide estimates,[4] heroin-related emergency room mentions declined from 1989 to 1990 by 18.7 percent, from 41,656 to 33,884. But during the same period, cocaine-related emergency room mentions declined by 27 percent, from 110,013 to 80,355. There is no doubt a connection here, since thousands of heroin-related overdoses are in fact the result of heroin and cocaine used in combination. One simply cannot be sure how much—some, most, or all—of the *apparent* decline in heroin use is attributable to decreasing cocaine use. (Overall DAWN figures show the widespread extent of multiple mentions. For example, in 1990, total emergency room drug abuse *episodes* are estimated at 371,208; emergency room drug *mentions* are estimated at 635,460.)

It is very important to note that polydrug use can skew trends in DAWN data in both directions. Most importantly, the steady and substantial rise in heroin-related emergency room and medical examiner mentions from 1979 to 1989 may be misleading. After all, cocaine use (and presumably the use of heroin and cocaine in combination) skyrocketed during this period.

***DAWN Metropolitan Data***

Data for this analysis was provided to BOTEC by Abt Associates of Cambridge, Massachusetts. Abt abstracted all records which mentioned the abuse of heroin/ morphine from the DAWN data for 1986 through 1989. BOTEC recoded these data into two sets—one for emergency room visits and one for medical examiner

reports which provided the basis for subsequent study. Thus the analysis is of heroin/morphine related incidents in the DAWN data for the years 1986 through 1989 only.

***Emergency Room Visits Involving Heroin***

Tables 7a through 7c present an analysis of emergency room visits in this data set. Data are presented for seventeen DAWN metropolitan areas. Included in this analysis are any DAWN metropolitan areas whose emergency room visits constituted one percent or more of all DAWN emergency room visits in the data set in any of the years 1986 through 1989.

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[3] NIDA, Drug Abuse Warning Network (October 1991 data file).

[4] Ibid.

Altogether these seventeen DAWN metropolitan areas account for better than ninety percent of the emergency room visits in the data set.

Table 7a presents the uncorrected figures derived directly from the data set. They are uncorrected for providers which failed to provide data for one or more years. For example, if an emergency room regularly reported about one hundred visits annually between 1986 and 1988 and then failed to report in 1989, this might create an apparent, but probably false, impression that heroin-related emergency room visits dropped by one hundred cases.

To adjust the data for nonresponse, the following procedure was adopted. The average annual number of reported emergency room visits was calculated for each provider who reported for one or more years. It was then assumed that the provider would have reported this number of visits in any year when no visits were reported.[5] Summing these estimates over all providers for each DAWN metropolitan area and each year gave a correction for under-reporting; these figures are presented in Table 7b. Adding these corrections to the entries in Table 7a gives an estimate adjusted for under-reporting of emergency room visits for the entire sample. These estimates are presented in Table 7c.

It is worth noting that because the corrections are sometimes as large as one of the raw frequencies, the effects of misestimating the degree of under-reporting could have a major impact on the findings. Fortunately, the corrected and uncorrected DAWN frequencies tend to show similar results. Furthermore, these results tend to confirm published DAWN data for the previous decade, 1976-1985.

The last two columns of Tables 7a and 7c compare the trend in heroin admissions for the period 1976-1985 and the period 1986-1989. The first of these columns is copied from published DAWN analyses.[6] The second of these two columns is derived from the analysis of our data set as presented in columns two through five of Tables 7a and 7c.

In these columns, "NA" means no data was collected for this area during the cited period, "NC" means no clear trend was discernable in the data during the cited period, "Positive" means a clear upward trend was observable in the data during the period cited, "Negative" means a clear downward trend was found in the data during the period cited.[7]

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[5] Estimation procedures which factored in trends from geographically proximate providers would probably be more accurate. Such an approach would be considerably more complicated, however.

[6] See Table 2.ER1, page 11 in "Trends in drug abuse related hospital emergency room episodes and medical examiner cases for selected drugs DAWN 1976-1985", *Topical Data From The Drug Abuse warning Network*, Series H, Number 3 (U.S. Department of Health and Human Services, National Institute of Drug Abuse, 1987).

[7] These conclusions were based on subjective observations of significance. Because the consistent panel was not a probability

Nearly half the metropolitan areas in Table 7c show a significant rise in heroin or morphine related emergency room visits during the period 1986 through 1989. In four of these areas (New York, Philadelphia, Seattle, and Washington, D.C.) this trend is the continuation of an increase in heroin or morphine related emergency room visits during the period 1976 through 1985. In two others (Boston and Chicago), this trend reverses a decrease in heroin or morphine related emergency room visits during the period 1976 through 1985. Furthermore the increases in heroin or morphine related emergency room visits are quite large among metropolitan areas that show such increases during the period 1986 through 1989, e.g., better than 50% in Boston, better than two-thirds in Chicago, more than 100% in Philadelphia.

On the other hand, three areas (Detroit, Miami, and San Antonio) show clear downward trends in emergency room visits which involve heroin during the period 1986 through 1989. In Detroit and Miami these reductions are sizable, amounting to reductions of about 50% and 80% respectively. The data appear to suggest that heroin is once again becoming a more serious problem in some metropolitan areas although this pattern is not universal. In the data set, northeastern cities and Seattle seem most affected by increased heroin use.

### *Medical Examiner Reports Involving Heroin*

Tables 8a through 8c present an analysis of medical examiner reports in the data set. These tables were constructed in the same manner as Tables 7a through 7c, and generally the results are parallel. Because of the smaller numbers in these tables, however, clear trends are harder to discern.

### *Emergency Room Visits Involving Injected Heroin*

Table 9 shows the percentage of emergency room visits in the sample which involved injected (as opposed to smoked or snorted) heroin or morphine. The base for these percentages is found in Table 7a. A downward trend is clear in the percentage of heroin-related emergency room visits which involve injected heroin. Nearly two-thirds of the metropolitan areas in the analysis showed such a trend.

Furthermore, in cities showing such downward trends, the magnitudes were pronounced. In Baltimore, for example, the proportion of heroin-related emergency room visits involving non-injected heroin rose steadily from 10.6% in 1986 to 19.0% in 1989. By contrast, in cities which showed an upward trend in injection, the changes were relatively small.

Most interestingly, those same cities which showed the greatest increases in absolute numbers of heroin-involved emergency room visits also showed the greatest increases in the proportion

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sample, results cannot be generalized or considered representative of hospitals or emergency room cases. Just as results cannot be generalized, standard statistical tests of significance cannot be performed.

of these visits involving non-injected heroin. A possible conclusion is that non-injected heroin (probably inhaled or smoked) is gaining acceptance in these cities.

### *Summary of DAWN Metropolitan Analysis*

The DAWN data suggest that heroin usage is rising in some areas—particularly in northeastern and northwestern metropolitan areas. Rising with the number heroin-related emergency room visits is the proportion of such visits involving smokable or inhalable heroin. This suggests that inhalable and smokable heroin may be gaining popularity.

## DUF

### *The Drug Use Forecasting System (DUF)*

DUF is a system, administered by the National Institute of Justice (NIJ), which samples arrestees over the course of about two weeks at four times during the year in approximately twenty participating sites. Selected arrestees are requested to complete a questionnaire on drug use and submit a sample of urine which is tested for drug residues. Participation of arrestees is voluntary. For this, and other reasons, DUF cannot be considered a statistically valid probability sample. Nevertheless, the DUF data provides a valuable glimpse of current drug abuse practices among those who run afoul of the law enforcement system.

### *Cocaine Abuse as a Benchmark*

Because many heroin users are also cocaine (including crack) users, changes in cocaine use can directly affect heroin use. This is especially true in the case of addicts, who are heavily represented among arrestees. Table 10 presents the proportion of arrestees in the 1988 and 1989 DUF samples whose urine tested positive for cocaine residue; the figures are cross-tabulated by site and age. Each cell of the table also provides the number of DUF respondents upon which this proportion is based. Several aspects of this table are worth noting.

First, even though cocaine use seems to be prevalent among the arrestees in the majority of DUF sites, some sites show higher rates than others. Among the sites with the highest rates of positive for cocaine use are New York, Washington, D.C., Chicago, Los Angeles, Philadelphia, and Miami. In each of these sites more than half of all arrestees tested positive for cocaine residue. By contrast, some DUF sites have comparatively low cocaine positive rates. These sites include Indianapolis, Phoenix, Omaha, San Antonio, and San Jose.

Also important to note is that cocaine use appears to be a problem that cuts across all age groups (excepting those under age fifteen.) In New York, for example, over half of arrestees in each age group tested positive. Even in Indianapolis, the city with the lowest fraction of positive samples in 1989, differences across age groups are not great. At the low end, 18.6 percent of those aged 15-20 tested positive; at the high end, 28.0% of those aged 36 and over tested positive.

*Positive Urinalysis Tests for Opiates*

Table 11 presents the proportion of those in the 1988 and 1989 DUF samples whose urine samples tested positive for opiate residue; figures are cross-tabulated by site and age. Positive tests for opiates are known to be due primarily to the use of heroin and heroin substitutes. The data revealed that, in the DUF samples, positive opiate urinalyses correlate highly with self-reports of heroin and/or "black tar" use or addiction.

The patterns shown in Table 11 are particularly interesting when compared with those in Table 10. First, opiate abuse impacts no city to anywhere near the same extent as cocaine abuse. In general, the proportion of positive opiate tests is about one-third to one-half the proportion of positive cocaine tests at any site (or within any age-group).

Perhaps more important, the proportion of arrestees testing positive for opiates appears to vary significantly with age. In particular, opiate use seems quite low in younger arrestees, although it rises markedly in the older age groups. This stands out in sharp contrast to the cocaine data in Table 10, where differences among age groups are much less pronounced.

There are at least two plausible explanations for this phenomenon. One is that opiate abuse tends to begin at later ages than cocaine abuse (perhaps because some cocaine users switch to heroin as they get older). A second explanation is that older persons who are currently using opiates are vestiges of the heroin epidemic which occurred in this country during the 1960s and early 1970s.

*Additional Measures of Heroin Use*

Tables 12 through 15 present the proportions of those in the 1988 and 1989 DUF samples who answered affirmatively to various questions about the use of heroin, black tar, and methadone. These proportions are cross-tabulated by site and age. Overall, these figures confirm the patterns in Table 11, which are described above.

*Cohort Patterns of Opiate Abuse*

It is generally agreed that heroin users who begin use at a young age are more likely to spread heroin use among their peers than those who begin use at a later age. With this in mind, BOTEC divided 1988 and 1989 DUF respondents into cohorts based on when they first used heroin or black tar. The cohorts were comprised of those who:

1. First used heroin or black tar before 1960.
2. First used heroin or black tar between 1960 and 1969.
3. First used heroin or black tar between 1970 and 1979.
4. First used heroin or black tar between 1980 and 1983.
5. First used heroin or black tar between 1984 and 1986.

6. First used heroin or black tar after 1986.

BOTEC then calculated the age distribution of first use of heroin or black tar for DUF respondents in each of these cohorts. This was done separately for sites with low current volumes of heroin abuse, sites with high current volumes of heroin abuse, and all DUF sites. The results are presented in Table 16.

As can be seen from Table 16, heroin and black tar abusers who began using these drugs during the heroin epidemic of the 1960s appear to have started using heroin at a much younger average age than current users.

If this is in fact the case, then Tables 11 and 16 offer some welcome news about the danger of a new heroin epidemic. Current users of heroin and black tar do not appear to be starting to use these drugs at the young ages which currently characterize the use of cocaine/crack, at least among arrestees.

However, the data in Table 16 should be viewed with some caution. One problem concerns survival effects. Persons who first used heroin at older ages in the 1960s are obviously older than those who first used heroin at younger ages in the 1960s. Since age is correlated with both higher rates of mortality and lower rates of arrest, those who began heroin use in the 1960s at older ages may be underrepresented in the DUF samples. As a result, initial heroin use during the epidemic of the 1960s may have occurred at older ages than is suggested by the data in Table 16.

Another problem is that there may be a time lag between starting heroin use and developing the sort of heroin habit that leads to being arrested frequently. If so, there may be a population of new heroin users not captured in the DUF system.

***The Relationship between Cocaine abuse and Heroin Abuse***

BOTEC conducted one further analysis to determine the relationship between heroin and black tar use and cocaine use, and in particular whether the relationship changes with different age cohorts. Taking all persons in the DUF sample who ever used heroin or black tar, BOTEC determined whether they had also ever used cocaine/ crack and, if so, which drug they used first. One would expect that if a heroin abuse problem were developing, we might see more persons starting to use heroin or black tar without the intermediate step of using cocaine/crack. The results of our analysis are found in Table 17, and are summarized below.

Table 17 shows the proportion of persons who ever used heroin or black tar in the following categories:

1. Never used cocaine/crack.

2. Started using cocaine/crack before using heroin/black tar.

3. Started using heroin/black tar before using cocaine/crack.

4. Started using heroin/black tar and cocaine at about the same time.

These distributions are presented separately for cohorts who began using opiates before 1960, in the 1960s, and so on as described above for Table 16. Tabulations are also provided separately for sites with high and low volumes of heroin abuse and for the 1988 and 1989 DUF samples.

There were no significant differences in the relationship between cocaine and heroin use between low and high volume heroin sites, nor between the 1988 and the 1989 DUF samples. The most significant observation from these tables is that there is a steady increase according to year of first opiate use in the proportion of heroin users who report that they used cocaine before heroin. (In other words, those who recently first used opiates are more likely to have previously used cocaine.)

This suggests that current heroin users are being recruited in large part from cocaine users. Indeed, between half and two-thirds of the DUF sample who have used heroin or black tar claim to have used cocaine or crack before trying either of these opiates. And only about ten percent of those who began using opiates recently report that they have never used cocaine.

### *Summary of DUF Analysis*

In summary, DUF data suggest that heroin use is still much less prevalent than cocaine use. Perhaps more important, if heroin use is in danger of spreading, the demographic characteristics of that spread are likely to be quite different from the characteristics of the heroin epidemic of the 1960s and early 1970s. Current heroin abusers appear to start their use at a later age than did abusers in the earlier epidemic. Furthermore, it appears that, at least among arrestees, heroin users are currently coming from the ranks of cocaine and crack users.

## Interviews

### *About the Interviews*

BOTEC conducted twenty-four interviews with drug enforcement and treatment leaders from fifteen U.S. cities: Atlanta, Boston, Chicago, Denver, Detroit, El Paso, Houston, Los Angeles, Miami, New York, Oakland, San Diego, San Francisco, Seattle, and Washington D.C. Respondents were asked to identify current and proposed heroin abatement/treatment programs, patterns of heroin sales and distribution, and patterns of heroin use and abuse (with particular questions focused on emerging trends). Information on supply included: geographical area of distribution, sales locations (homes, parks, street-side, schools, etc.), ethnicity of distributors and dealers, age of sellers, level of criminal organization, heroin purity and price information at the wholesale and street-level, etc. Information on use included: market size of user population, age distribution of users, ethnicity of users, and the breakdown of short- and long-term users, etc.

The interviews should not be considered a representative sample of either enforcement or treatment personnel. Moreover, much of the information gathered represents the subjective perceptions of respondents. A general summary of the responses is provided below. See Appendix B for a copy of the actual questionnaire.

### *Heroin Supply*

The respondents generally reported that, in their region, heroin purity has risen, heroin supplies are more plentiful, and that seizures have increased. More interesting and revealing, though, were the observations made about the character of local markets. Just over three-quarters of the respondents indicated that "organizational influences" were present in heroin distribution in their area. Cited most often in this regard were international criminal groups. Least mentioned were street gangs that are well known distributors of crack/cocaine.

The two groups that appear most involved in local distribution are the "Mexican Mafia" and African nationals, principally Nigerians. Respondents in Chicago, Denver, Detroit, Miami, Los Angeles, Oakland, San Diego, San Francisco, and Seattle all cited the influence of Mexican organized groups. Respondents in Atlanta, Chicago, Miami, New York, and Washington D.C. noted Nigerian or other African national groups.

That Southeast Asians were not reported as widely involved in local distribution is perhaps partially explained by another finding: apparently Nigerian nationals have been working with Southeast Asian smugglers who are trafficking a pure form of Southeast Asian heroin referred to as "China White."

In a particularly ominous development, it seems that Colombians are developing their own form of "white" heroin; in Los Angeles and New York, small amounts of purportedly South American grown heroin have been seized. Respondents in Miami and Washington, D.C. also expressed concern that Columbian cocaine cartels have allegedly begun to engage in heroin distribution, although no seizures have been made to date. They fear that competition from Colombian cartels could spell more trouble for violence-ridden urban communities, especially if a glut of heroin supply pushes prices even lower.

### *Heroin Use*

About three-fourths of the respondents felt that heroin use had increased since 1986 in their area; the remaining one-fourth felt that use levels had remained about the same. Interestingly, the median estimate of the amount of increased overall consumption was only 5 percent.

In general, enforcement officials reported higher estimates of new heroin use than did treatment personnel, although the latter group did report that heroin is more often now the "primary drug of choice" for those seeking treatment.

# Other Evidence

- The 1991 National Household Survey on Drug Abuse shows a significant increase in reported heroin use from the previous year.[8] The estimated population of "Lifetime" heroin users is 2,886,000 in 1991, compared to 1,654,000 in 1990.[9] The estimated number of "Past Year" heroin users is 701,000 in 1991, compared to 471,000 in 1990.

  That some of these estimates are not accurate is clear. Even if all of the 701,000 who used heroin in the past year were new users, this could not account for the estimated increase of 1,232,000 in the population of lifetime users. Because heroin use is not common, and because heroin addicts are often socially isolated and thus beyond the reach of surveys, we should not be surprised by these inconsistent and widely varying figures. On the other hand, we should not ignore them. For they may reveal that heroin use is spreading in more mainstream segments of society.

- Estimated world opium production is up significantly, with production in Southeast Asia more than doubling over the last five years. Table 18 presents data on worldwide net opium production from 1987-1991.

  Not reflected in Table 18, but particularly troubling, is the emergence of Colombia as a new source of opium production. In the past year, Colombian authorities have located several thousand acres of poppy fields. There was some question about morphine content, but recent tests have indicated it is quite high. Also ominous are unconfirmed reports that opium production is being directed by individuals and groups connected to the Medellin and Cali cartels.

- Worldwide smuggling activity is up, particularly on routes through Hong Kong and Nigeria.

- Seizures are up in Europe as well; 1982: 1.3 metric tons; 1990: 6.1 metric tons.

- There is some scattered DUF data from a few cites dating back several years before 1988. In general, this data shows a downward trend in the proportion of arrestees testing positive for opiates. For a number of reasons, however, this does not necessarily indicate any reduction in heroin consumption.

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[8] See NIDA, *National Household Survey on Drug Abuse*, 1990 and 1991.

[9] However, there is some question about the validity of the 1990 estimate of the population of lifetime users because it is 253,000 less than the estimated 1,907,000 lifetime users in 1988.

- For one thing, it may reflect the fall in heroin prices. As prices fall, there is less financial pressure on heroin addicts to commit crimes in order to support their habits. Fewer crimes means fewer arrests, which means fewer positive urinalyses.

  DUF figures may also reflect the increase in criminal activity among cocaine and crack users. As users of these drugs were arrested in greater numbers, the percentage of arrestees who were opiate users must have fallen. Since DUF measures proportions and not absolute numbers, the data would show a decrease in opiate use.

- While there is no national data on treatment populations showing trends over several years,[10] reports from New York indicate:

  - Increased incidence of snorting as primary mode of use among new entrants. Intranasal administration now accounts for 33 percent of use, up from 25 percent in 1988. By contrast, intravenous administration declined from 71 percent to 65 percent over the same period.

  - Decreased time since first use.

- Community Epidemiology Work Group reports no clear trend.

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[10] The Drug Services Research Survey provides detailed data for 1990; however, since only 1990 data is available, trend analysis is not possible.

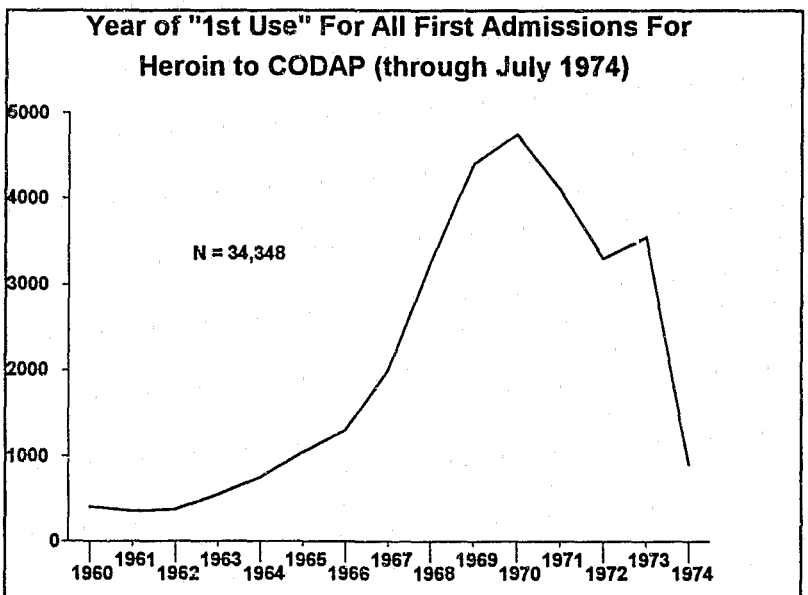
# Interpretation

Contrary to the popular image of the "drug pusher" who hooks new addicts in a premeditated and calculating fashion, heroin users are generally initiated to the drug by friends and peers. Heroin use thus spreads much like a communicable disease; heroin users are "contagious," and some of those with whom they come into contact get "infected."

In studying the spread of infectious diseases, epidemiologists distinguish between *incidence*, the rate of new cases per population unit, and *prevalence*, the number of cases per population unit at a given time. For many diseases, incidence is a function of prevalence; the more people that have the flu, for example, the more new cases we can expect to see. But not all heroin users are equally contagious. In fact, long-term addicts are frequently the least contagious. They are socially isolated, and knowing the pitfalls of prolonged use, they may not want to expose others. Moreover, they do not exactly present an appealing picture of the consequences of heroin addiction.

Research indicates that heroin users are most likely to initiate others when they themselves are new users, typically within their first year of use. One implication of this is particularly ominous—that heroin incidence is susceptible to periods of explosive growth. Imagine a population that had, for a period of time, fairly stable levels of heroin incidence and prevalence—just enough new users developed to replace older ones who quit or died. Then suppose that, for whatever reason, incidence rises. This creates more new users, who in turn initiate even more new users, and so on. In short order, an epidemic can develop.

This is what appears to have happened during the late-1960s. The graph above shows the year of first use among first admissions to treatment programs from 1960 to 1974. Two things are important to note. First, the rapidity with which the incidence of new use accelerated; in five years, from 1964 to 1969, incidence of new use more than quadrupled. Second, the incidence of new use began to decline sharply in 1971, before the 1972 heroin shortage. What this indicates is the importance of the size of the susceptible non-user population. As incidence, and then prevalence rise, the susceptible non-user population shrinks. Eventually, the susceptible population is almost fully depleted, and incidence of new use falls off dramatically.



Source: Leon Gibson Hunt and Carl D. Chambers, *The Heroin Epidemics: A Study of Heroin Use in the United States, 1965-1975* (New York: Spectrum Books, 1976), 63.

The purpose of this general discussion about heroin epidemics is not to suggest that we are now entering such a period. Rather, it is to illustrate the close connection between incidence of new use and the prospects of a new epidemic.

Unfortunately, it is not possible to directly measure incidence, nor even prevalence. What we have to rely on, instead, is a combination of indicators of supply (price, purity, seizures, etc.) and measures of *relative incidence*, the total number of cases per unit time for a specific population—those who have sought treatment, been arrested, overdosed, and so on. From these varied yardsticks, we then must attempt to make educated guesses about overall incidence and prevalence.

# Effects of Wholesale Changes on Retail Conditions

There is little doubt that worldwide opium production has increased over the last several years. There is some question, however, about whether the supply of heroin in the U.S. has risen concomitantly, although evidence surveyed in this report suggests that it has. Seizures are up, prices (adjusted for purity) are down, and most enforcement officials are reporting higher levels of trafficking activity.

It is certainly possible to develop alternative explanations that account for these facts. Some analysts have suggested, for instance, that increased seizures might be the product of better enforcement, and lower prices the consequence of shrinking demand. Upon closer examination, however, this interpretation of the available evidence does not seems convincing.

In terms of heroin prices, it does not seem that shrinking demand can explain their sudden drop. For one thing, despite the AIDS epidemic, indicators of use do not show clear signs of abating. With the exception of a sharp decline in 1990, heroin-related emergency room mentions and medical examiner reports have risen in every year since 1979, although these figures are admittedly influenced by trends in cocaine use. Moreover, the 1991 National Household Survey on Drug Abuse reports increases in both the percentage of respondents who have ever used heroin and the percentage using heroin in the past year. And added to this are growing reports of heroin smoking and snorting, especially among new users who were previously crack addicts.

A more plausible account of heroin prices points to the influx of high-purity Southeast Asian heroin. From 1987 to 1988, heroin of Southeast Asian origin increased its U.S. market share from one quarter to roughly half. (This was no doubt connected to the boom in Southeast Asian opium production, which more than doubled from 1987 to 1989.) As the market was flooded with this high-purity heroin (about 30 percent pure, much less diluted than heroin from Mexican or Southwest Asian sources), average purity levels quadrupled. Yet the retail price of heroin remained stable. As a result, the (purity-adjusted) price per pure milligram plunged. From 1979 to 1987, the average price per pure milligram hovered just above or at $2.00; in 1988, it fell to almost $0.50. It has since come back some, to about $0.90.

The abrupt and enormous expansion in Southeast Asian supply also seems to account for much of the increase in heroin seizures. In 1987, DEA and U.S. Customs reported seizing a total of 1,443 pounds of heroin between them; in 1988, they reported seizing 3,192 pounds.

While interdiction efforts have no doubt become more skilled, it is hard to chalk up a doubling in seizures in a single year to better enforcement alone—especially given that the rise does not appear associated with a longer-term trend. The quantity of heroin seized declined in the two years preceding 1987, and was lower in 1990 than it was in 1988.

Finally, it is not clear why the U.S. heroin supply would not increase in response to the loosening of worldwide supply conditions. Lower prices further up the distribution chain reduce the barriers to entry to dealing further down the chain. They also create the possibility of using smuggling and distribution techniques which are cheaper or less risky (in terms of arrest, not interdiction), accepting in return a greater chance of lost shipments (since, as noted above, the replacement cost of the shipment falls along with bulk drug prices.) For example, international mail and package services could become important methods of conveyance.

## Effects of Retail Conditions on Consumption

All other things being equal, an increase in the average purity of heroin sold at retail and a decrease in the (purity-adjusted) price should be expected to raise heroin consumption. This follows from the basic theory of consumer choice: at lower prices, heroin will be more competitive both with competing mind-altering substances (not only the other depressants such as alcohol and the barbiturates, but also, for example, cocaine) and with non-drug uses of money. This effect does not assume that all potential heroin users do explicit cost/benefit

analyses of heroin and its alternatives, only that price is a consideration for some users (as it surely is for those who spend very large proportions of their personal budgets on heroin.)

Moreover, the abstract theory of consumer choice is supported by concrete physiological, and sociological mechanisms acting at the individual and small-group levels. Most first time users are given heroin rather than buying it, and the cost of introducing a friend to the drug falls with the price of the drug. Higher doses are likely to be more reinforcing and dependency producing than lower ones. Not only does this mean that more "chippers" are likely to become chronic heavy users, it also implies increased difficulty in quitting for those who have already lost control of their heroin habits. Most important of all, while injection is virtually the only practicable mode of administration for expensive, low-purity heroin, novices can use higher-purity heroin intranasally or by smoking. Thus the fall in prices makes the heroin experience available to those who, for reasons of discomfort, stigma, or the fear of infectious disease, will not inject drugs.

The high price of heroin heretofore may have exerted a restraining effect on the tendency of some heavy drug users to combine heroin with cocaine, either to obtain a polydrug effect or simply to ease the "crash" following a cocaine binge. It also made it less likely that heavy cocaine users, particularly crack smokers, would switch to heroin. As heroin prices fall, the migration path from cocaine use to heroin use will tend to become easier.

On the other hand, there are several mechanisms working to restrain the consumption of heroin, whatever happens to its price. The miserable condition of most of the highly visible heroin addicts has created a substantial stigma on heroin use which is virtually society-wide. The association of heroin with AIDS has driven the lesson home even more firmly. Unfortunately, if there were a sudden upsurge in heroin initiation, the presence of many (temporarily) happy consumers for the drug would tend to change the drug's street reputation.

In the absence of supply changes, the trend in heroin use would likely be down. The existing user base is being steadily eaten away by cessation of use and by mortality (already high and now aggravated by aging and AIDS).[11] The massive revulsion from illicit drug use resulting from the cocaine experience of the past decade is probably making itself felt even in the social milieu from which most heroin users have traditionally been drawn. Growing supply may be relatively unimportant in the face of shrinking demand.

Moreover, price and purity represent only one aspect of the heroin supply situation. Retail availability, determined by the number, social and geographic distribution, and aggressiveness of retail dealers, shapes consumption patterns by determining the cost, in time and inconvenience, of searching for the drug. In the case of crack, the spread of the epidemic from city to city was limited less by wholesale supplies, which were always ample, than by the existence of retail distribution channels. The number of retail heroin dealers today is surely a small fraction of the number of retail cocaine and crack dealers, and the falling price of heroin itself, the raw material of dealing, does little directly to change the lack of distribution capacity.

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[11] See Caulkins and Kaplan, 1991.

In the long run, if lower prices and higher purities begin to attract a larger number of users, they will tend to increase the financial rewards of retail heroin dealing.[12] In the short run, however, lower prices may reduce retail earnings[13] while also reducing the need of current heroin users for income to support their habits. On the other hand, as the number of new users rises, they will provide both a market and a labor supply for the retail distribution system. And as the market grows, the ratio of enforcement to market size decreases, so enforcement imposed costs shrink, making the market all the more appealing. As is true with the drug's word-of-mouth reputation, its limited retail distribution network acts as a brake on the development of an initial cadre of new users, but once that cadre forms its growth will tend to be self-stimulating. Hence, for a variety of reasons the heroin market is inherently less stable than markets for most licit goods. Once it begins to grow (if it does), that growth may fuel further growth.

## Effects of Supply Conditions on Drug-Related Harm

Lower prices and higher purities have a mix of effects, some harmful, some beneficial. On the one hand, high price represents a barrier to initiation and a source of continuing pressure on current users to limit their consumption or to quit entirely. On the other hand, high price contributes to the poverty of users and thus to their ill health and, very possibly, their criminal activity. It also places a premium on injection as the most "economical" way to use heroin, and may contribute to needle-sharing. In effect, high prices reduce the number of milligrams of heroin used but increase the average damage done by each milligram.[14] Lower prices reverse these effects.

One traditional concern about increasing purity is that it will result in an increased frequency of deaths and injuries due to unintentional overdose. But the rate of unintentional overdose ought to be related to the uncertainty in purity as much as to its absolute level, and higher purity will tend to decrease, rather than increase, that uncertainty. A heroin user accustomed to 5% pure heroin who gets 50% pure instead can wind up giving himself ten times as much pure heroin as he expects, with devastating effects. A user accustomed to 50% pure heroin faces no such risk; at worst, the drug supply might be twice as potent as expected. Moreover, higher purity means that a user of any given volume of heroin has to absorb a smaller amount of diluents and adulterants.

On the other hand, it seems likely, based on abstract reasoning and the European experience, that lower prices will increase the average daily consumption among chronic heavy heroin

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[12] The market for crack cocaine illustrates this phenomenon: high volumes generate large retail incomes, even at low unit prices. See Reuter, MacCoun, and Murphy, 1990.

[13] See Caulkins, 1990.

[14] See Moore, 1979.

users. Increased consumption, to the extent that it occurs, will tend to counteract the benefits of the reduced "cost of living" represented by a decline in heroin price. It may narrow the range between the desired dose and a fatal overdose because tolerance to the drug's psychological effects builds up more quickly than tolerance to its effects on motor function. Additionally, heroin users accustomed to very high doses are likely to experience more unpleasant withdrawal symptoms than low-dose users; this will tend to reduce the frequency of unsupervised withdrawal and pose a problem for treatment providers.

The beneficial effects of reduced prices in terms of increased welfare and decreased criminality of current users take effect more or less immediately. The harmful effects of increased consumption take place more slowly, since individual heroin habits and social practices around heroin use are strongly inertial. Thus, like a dose of heroin to an addict in withdrawal, falling prices are likely to generate short-term relief at the cost of long-term problems.[15]

## Interpreting the Evidence on Current Trends

To date, there is no strong evidence that a new heroin epidemic has begun. But this may say as much about the data collection systems in place as it does about the existence (or not) of significant trends.

The seizure data themselves provide evidence that the physical volume of heroin being consumed has increased. In the very short run, increased shipments need not reflect increased consumption; slack demand can create involuntary inventory buildup in illicit as well as licit markets. But just as unsold automobiles on car dealers' lots eventually lead to reduced production in Detroit, unsold heroin in distributors' and dealers' stashes will reduce demand at wholesale, and importers will quickly learn that even a technically successful smuggling venture fails to earn economic reward.

Thus the fact that seizures have increased, not for a quarter or even a year, but for several years in succession, suggests that more heroin is going into users' bodies than was the case five years ago.

This in turn must reflect some combination of more users and more consumption per user. Increasing tolerance and possible shifts to less "efficient" modes of administration—away from intravenous injection to smoking or insufflation—implies that the number of hours or days each user spends under the influence of heroin will grow more slowly than the physical dosage per user. The physical consumption of heroin would double, for example, if the user population and doses per user per day both remained fixed, while the heroin content of each dose doubled as a result of a purity increase from 10% to 20%.

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[15] For example, Brown and Silverman 1974 provide some empirical support for the proposition that lower heroin prices are associated with short-term declines in property crime.

The question, then, is how much of the additional supply of heroin is attributable to an increase in the number of users (by increasing rates of initiation and relapse from abstinence or by decreasing quit-attempt rates) and how much is attributable simply to an increase in consumption rates by existing users. The former set of effects is far more worrisome than the latter.

Survey evidence is of little value here. Heroin use among the U.S. population is too rare, and too socially marginal, an activity to be reliably measured by administering questionnaires to national probability samples via standard data collection methodologies (i.e., households, telephones, etc.)

Street ethnography, particularly the systematic variety as practiced by the Street Studies Unit of NDRI in New York, has better prospects for noticing (though not for measuring) changes, but street ethnographers of necessity start from known populations of users and may easily miss pockets of new users developing at a social distance from existing users. In addition, New York's street studies capability is unique; there is no comparable capacity to detect the early stages of a microepidemic in Atlanta or Oakland. The Community Epidemiology Work Groups are only a partial substitute.

The other systematic data collection efforts tend to count drug users in trouble and thus miss drug users just starting out. DAWN counts users injured or killed, DUF users arrested and booked, the treatment system users who have lost control of their habits or are mandated to treatment. Any of these systems would notice a truly massive upsurge; if the number of heroin users had doubled, almost certainly the number of injuries, deaths, arrests, and (somewhat later) treatment entries would show that fact. But if the number of initiations had merely gone from a few tens of thousands—roughly the replacement level for a chronic user population in the hundreds of thousands—to twice that level, the addition of a few more tens of thousands of new, and consequently low problem incidence, users to the existing population might not show up for several years. Furthermore, despite their names, these are lagging and not leading indicators, because most users do not experience such severe problems immediately upon initiation.

Moreover, the short-term benefits of lower heroin prices may mask some of the effects of rising initiation; for example, arrestee heroin use as measured by DUF. If lower prices have (temporarily) reduced the rate of income-producing crime by existing users, that will at least partially compensate, for the addition of some new users, many of them still able to finance their heroin use from non-criminal sources. As discussed above, it is not clear what effect steadily lower prices and higher purities have on accident rates or treatment entry rates; in any case, the combined effects of the continued aging of the existing user cohort and of the HIV epidemic may overwhelm any effect of adding new users to the pipeline.

The strongest sign of a growing number of new users would be the entry of large numbers of younger users, with more recent dates of first use, into treatment or even DAWN. Also ominous would be widespread heroin smoking or snorting in lieu of injection among those showing up at jails and treatment centers. Some of these effects are indeed showing up. Among arrestees, for example, there are noticeable numbers of recent heroin users, although

few of them are young and almost all of them have previous experience with cocaine. In some cities, including New York, Newark, and Chicago, one-third of current heroin treatment entrants report intranasal administration as their primary mode.

Currently accessible data does not allow one to come to any strong conclusion about current heroin initiations. Inaccuracy in some data sets is a problem, but the biggest weakness in the data is that it tends to overlook new users. The problem is especially prominent with respect to data on use and consequences. Tallies of emergency room and medical examiner mentions quantify only the most extreme levels of abuse, behavior not generally associated with new or casual users.

In fact, the low prices and high purities that characterize the present heroin environment could lead to temporary reductions in many abuse statistics, while at the same time enticing growing numbers of new users. For one thing, lower prices ease the financial pressure on addicts to commit crimes in order to support their habits. Hence, fewer heroin users may show up in arrestee surveys. And higher purities may bring about a fall in overdose numbers. Unintentional overdoses are related to the uncertainty in purity as much as its absolute level, and higher purity will tend to decrease, rather than increase, that uncertainty.

The long-term effects of low price and high purity are likely to be far less benign. While there is little evidence yet of rising heroin initiation rates among young users without prior hard-drug experience, low prices and high purities present the threat of an increase in the heroin-using population, with all that might mean for the future in terms of addiction, crime, and disease. The gravity of the threat suggests the need for more intensive monitoring efforts and for readiness to address the heroin problem as its shape continues to emerge.

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# Appendix A - Tables and Charts

Table 1: National Heroin Prices and Purities at Kilogram, Ounce, and Street Levels 1982-1990.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| Kg Level | | | | | | |
| SW Asian kilogram ($000) | $250.00 | $185.00 | $170.00 | $160.00 | $160.00 | $160.00 |
| SE Asian kilogram ($000) | $190.00 | $185.00 | $185.00 | $145.00 | $150.00 | $160.00 |
| Mexican kilogram ($000) | $480.00 | $275.00 | $277.50 | $165.00 | $150.00 | $150.00 |
| Avg. $/kg (using HSP weights) | $319.80 | $214.70 | $205.88 | $159.85 | $153.60 | $155.80 |
| Purity (from '87-90 report) | | | | | | 64.40% |
| $/pure mg., Avg. price | | | | | | $0.24 |
| | | | | | | |
| Ounce Level | | | | | | |
| Ounce Price ($000) | | | | $6.75 | $6.75 | |
| Purity (from individual reports) | | | | 60.00% | 40.00% | |
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| Street Level | | | | | | |
| Gram of Tar ($) | | | $450.00 | $400.00 | $400.00 | |
| Gram of Powder ($) | | | $110.00 | $122.50 | $135.00 | |
| Purity (per cent) | | | 4.70% | 5.30% | 6.20% | |
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| NB: All prices and purities are midpoints of ranges, not averages | | | | | | |
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| Source: DEA Office of Intelligence Reports | | | | | | |

Table 1 (continued): National Heroin Prices and Purities at Kilogram, Ounce, and Street Levels 1982-1990.

| | 1988 | 1989 | 1990-I | 1990-II | 1990-III | 1990-IV |
|---|---|---|---|---|---|---|
| Kg Level | | | | | | |
| SW Asian kilogram ($000) | $135.00 | $102.50 | $135.00 | $140.00 | $140.00 | $127.50 |
| SE Asian kilogram ($000) | $155.00 | $132.00 | $160.00 | $165.00 | $155.00 | $157.50 |
| Mexican kilogram ($000) | $150.00 | $100.00 | $120.00 | $122.50 | $122.50 | $112.50 |
| Avg. $/kg (using HSP weights) | $148.55 | $118.35 | $145.55 | $149.98 | $144.38 | $140.85 |
| Purity (from '87-90 report) | 64.65% | 73.15% | 73.85% | 73.85% | 73.85% | 73.85% |
| $/pure mg., Avg. price | $0.23 | $0.16 | $0.20 | $0.20 | $0.20 | $0.19 |
| | | | | | | |
| Ounce Level | | | | | | |
| Ounce Price ($000) | $7.10 | $5.75 | $7.75 | $6.75 | $5.75 | $7.00 |
| Purity (from individual reports) | 50.00% | | | | | |
| Purity (from '87-90 report) | 46.25% | 60.10% | 57.50% | 40.50% | 39.50% | 47.00% |
| $/pure mg. (w/ '87-90 report purity) | $0.54 | $0.34 | $0.48 | $0.59 | $0.51 | $0.53 |
| | | | | | | |
| Street Level | | | | | | |
| Gram of Tar ($) | $350.00 | $275.00 | $280.00 | $285.00 | $285.00 | $275.00 |
| Gram of Powder ($) | $145.00 | $265.00 | $240.00 | $225.00 | $200.00 | $265.00 |
| Purity (per cent) | | | | | | |
| Purity (from '87-90 report) | 26.00% | 30.00% | 27.50% | 27.00% | 20.50% | 24.50% |
| $/pure mg. powder (w/ '87-90 purity) | $0.56 | $0.88 | $0.87 | $0.83 | $0.98 | $1.08 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| NB: All prices and purities are midpoints of ranges, not averages | | | | | | |
| | | | | | | |
| 1990 kg. purities are full year figures, not data for individual quarters | | | | | | |
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| Source: DEA Office of Intelligence Reports | | | | | | |

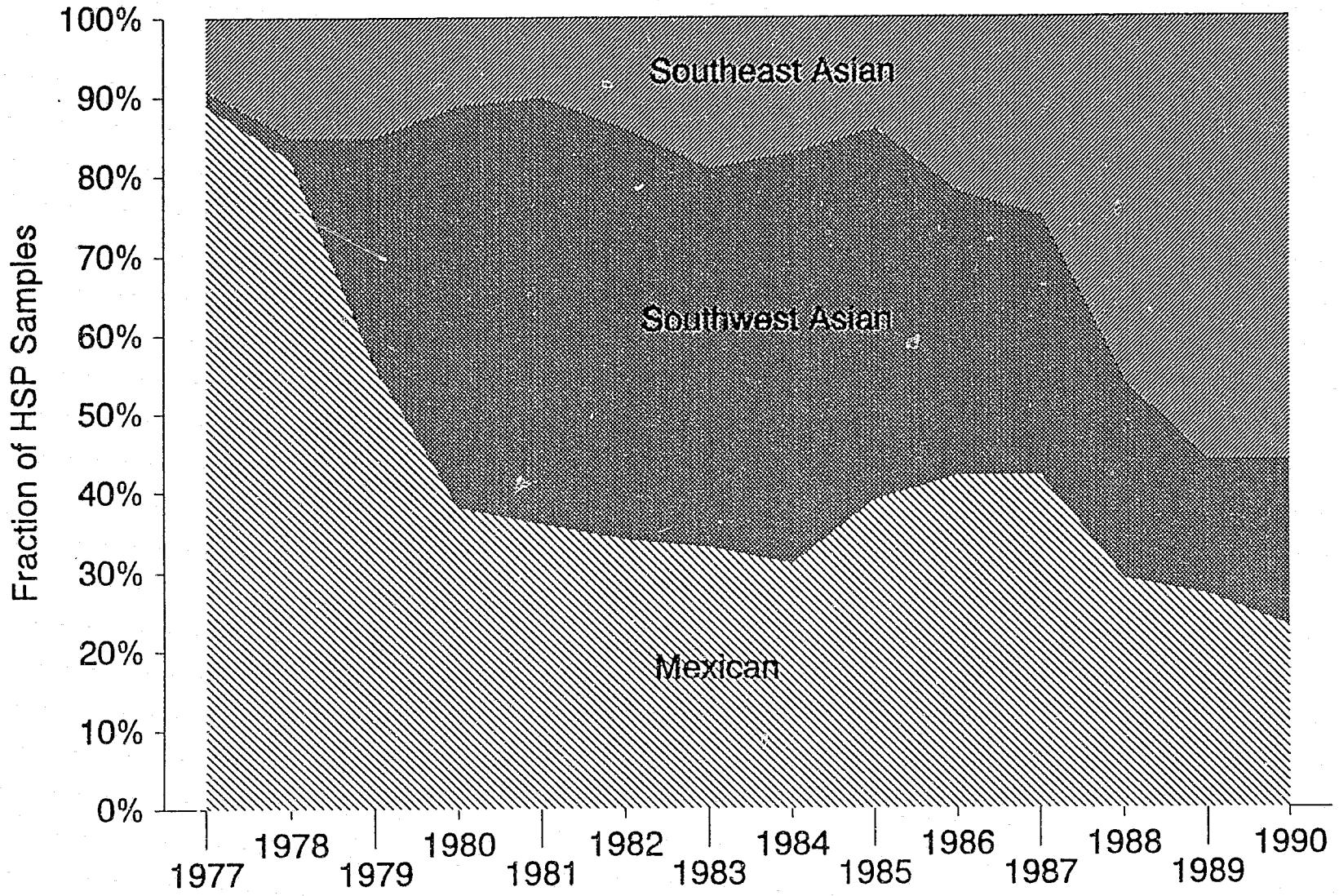
Table 2: National Heroin Data

| Year | Overall Average | | Mexican | | Southeast Asian | | Southwest Asian | | Unclassifiable | | Total DMP samples |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Purity | $/pure mg | Purity | HSP Fraction | Purity | HSP Fraction | Purity | HSP Fraction | Purity | DMP samples | |
| 1973 | 5.1 | $1.18 | | | | | | | | | |
| 1974 | 5.8 | $1.15 | | | | | | | | | |
| 1975 | 6.1 | $1.22 | | | | | | | | | |
| 1976 | 6.3 | $1.30 | | | | | | | | | |
| 1977 | 5.3 | $1.58 | | 89.0% | | 9.0% | | 2.0% | | | |
| 1978 | 4.4 | $1.8[illegible] | | 82.0% | | 15.0% | | 3.0% | | | |
| 1979 | 3.6 | $2.25 | | 56.0% | | 15.0% | | 29.0% | | | |
| 1980 | 3.8 | $2.21 | | 38.0% | | 11.0% | | 51.0% | | | |
| 1981 | 3.9 | $2.34 | | 36.0% | | 10.0% | | 54.0% | | | |
| 1982 | 5.0 | $2.13 | | 34.0% | | 14.0% | | 52.0% | | | |
| 1983 | 4.5 | $2.15 | | 33.0% | | 19.0% | | 48.0% | | | |
| 1984 | 4.7 | $2.34 | | 31.0% | | 17.0% | | 52.0% | | | |
| 1985 | 5.3 | $2.30 | | 39.0% | | 14.0% | | 47.0% | | | |
| 1986 | 6.1 | $2.12 | | 42.0% | | 22.0% | | 36.0% | | | |
| 1987 | ≈6.0 | $2.00 | | 42.0% | | 25.0% | | 33.0% | | | |
| 1988 | | | | 29.0% | | 46.0% | | 25.0% | | | |
| 1989 | | | | 27.0% | | 56.0% | | 17.0% | | | |
| 1990 | | | | 23.0% | | 56.0% | | 21.0% | | | |
| | Average Purity | | Purity | DMP Fraction | Purity | DMP Fraction | Purity | DMP Fraction | | | |
| FY1988 | 27.6% | | 29.0% | 43.0% | 30.5% | 38.0% | 18.4% | 19.0% | | 59 | 230 |
| 1989 | 26.0% | | 32.6% | 42.0% | 26.2% | 40.0% | 10.2% | 18.0% | | | |
| 1990 | 20.4% | | 14.4% | 46.0% | 29.1% | 42.0% | 13.1% | 12.0% | | | |
| 1989-II | 28.8% | | 39.3% | 45.5% | 26.0% | 36.4% | 6.8% | 18.2% | 6.7% | 2 | 57 |
| 1989-III | 25.5% | | 27.3% | 43.8% | 28.9% | 39.6% | 12.5% | 16.7% | 11.9% | 12 | 60 |
| 1989-IV | 21.7% | | 17.0% | 51.0% | 30.0% | 35.3% | 18.1% | 13.7% | 15.8% | 15 | 66 |
| 1990-I | 23.2% | | 16.0% | 45.5% | 32.2% | 45.5% | 14.4% | 9.1% | 7.5% | 17 | 61 |
| 1990-II | 23.0% | | 16.7% | 37.1% | 29.9% | 52.9% | 10.1% | 10.0% | 13.7% | 21 | 91 |
| 1990-III | 18.3% | | 11.6% | 43.3% | 25.4% | 46.7% | 14.0% | 10.0% | 8.3% | 17 | 77 |

Notes: 1973 figures are partial year data; 1986 price and purity data from first six months of 1986 only; average purities calculated using DMP fractions.

Sources: Price and purity: 1973-82: *'83 DMP Report*; 1983-84: *'84 DMP Report*; 1985-86: *'85-86 NNICC*; 1987: *'87 NNICC*. HSP fractions: 1977: *HSP Document*; 1978: *'82 NNICC*; 1979-80: *'83 NNICC*; 1981-82: *'84 NNICC*; 1983-90: *'90 Heroin Report*. DMP Fractions: FY1988: *FY1988 DMP Report*; 1989: *'89 NNICC*; 1990: *'90 NNICC*; 1989(II)-1990(III): *DMP Quarterly Reports*.

## Figure 1: Heroin Availability in the United States




Source: HSP (see Table 2)

Table 3: Heroin Prices, Purities, and Dominant Sources for Nine Major Cities.

| | FY1981 | FY1982 | FY1983 | FY1984 | | FY1988 | FY1989 | FY1990 |
|---|---|---|---|---|---|---|---|---|
| Atlanta | | | | | | | | |
| Avg. Purity | 1.70% | 2.20% | 2.00% | 1.95% | | 6.20% | 11.90% | 10.10% |
| # Samples | | | | | | 41 | 28 | 27 |
| Dominant Type | | | | | | | SEA | SEA |
| Price/Pure mg. | $6.07 | $7.11 | $8.58 | $8.94 | | $4.50 | $3.46 | $6.08 |
| Baltimore | | | | | | | | |
| Avg. Purity | | | | | | | 11.60% | 3.00% |
| # Samples | | | | | | 15 | 33 | 35 |
| Dominant Type | | | | | | | SEA | Unclear |
| Price/Pure mg. | | | | | | | $2.04 | $13.59 |
| Chicago | | | | | | | | |
| Avg. Purity | | | | | | 3.60% | 14.20% | 8.20% |
| # Samples | | | | | | 38 | 39 | 30 |
| Dominant Type | | | | | | | SWA/-MEX | SWA/-MIXED |
| Price/Pure mg. | | | | | | $9.26 | $1.64 | $3.62 |
| Detroit | | | | | | | | |
| Avg. Purity | 6.00% | 4.10% | 4.10% | 2.40% | | 15.60% | 13.10% | 21.70% |
| # Samples | | | | | | 36 | 14 | 15 |
| Dominant Type | | | | | | | SEA | SEA |
| Price/Pure mg. | $4.96 | $2.46 | $2.97 | $3.11 | | $1.65 | $1.19 | $1.36 |
| Los Angeles | | | | | | | | |
| Avg. Purity | 3.20% | 6.40% | 7.80% | 6.50% | | 16.00% | 18.50% | 12.70% |
| # Samples | | | | | | 31 | 35 | 43 |
| Dominant Type | | | | | | | MEX | MEX |
| Price/Pure mg. | $4.07 | $2.71 | $1.72 | $2.07 | | $1.50 | $1.16 | $5.30 |
| Miami | | | | | | | | |
| Avg. Purity | | | | | | | | 4.50% |
| # Samples | | | | | | | | 15 |
| Dominant Type | | | | | | | | MEX |
| Price/Pure mg. | | | | | | | | $4.83 |
| New York | | | | | | | | |
| Avg. Purity | 6.70% | 3.80% | 8.50% | 10.45% | | 34.30% | 37.20% | 37.00% |
| # Samples | | | | | | 79 | 68 | 77 |
| Dominant Type | | | | | | | SEA | SEA |
| Price/Pure mg. | $1.49 | $1.35 | $1.72 | $1.46 | | $1.81 | $1.64 | $1.80 |
| Phoenix | | | | | | | | |
| Avg. Purity | | | | | | 45.30% | 47.00% | 19.50% |
| # Samples | | | | | | | 38 | 39 |
| Dominant Type | | | | | | | MEX | MEX |
| Price/Pure mg. | | | | | | $2.44 | $1.50 | $1.33 |
| Washington DC | | | | | | | | |
| Avg. Purity | | | | | | | | 14.20% |
| # Samples | | | | | | | | 29 |
| Dominant Type | | | | | | | | SEA |
| Price/Pure mg. | | | | | | | | $4.19 |

Table 4: Heroin Seizures (lbs.)

| Year | Drug Enforcement Administration | U.S. Customs Service | | | Total Quantity (in pounds) |
|---|---|---|---|---|---|
| | Quantity (in pounds) | Number of Seizures | Quantity (in pounds) | Average Seizure (in pounds) | |
| 1978 | 442 | 179 | 188.6 | 1.1 | 630.6 |
| 1979 | 180 | 173 | 122.5 | 0.7 | 302.5 |
| 1980 | 201 | 149 | 268.7 | 1.8 | 469.7 |
| 1981 | 332 | 170 | 234.7 | 1.4 | 556.7 |
| 1982 | 608 | 168 | 289.9 | 1.7 | 897.9 |
| 1983 | 662 | 285 | 593.6 | 2.1 | 1,255.6 |
| 1984 | 850 | 396 | 664.3 | 1.7 | 1,514.3 |
| 1985 | 985 | 426 | 784.6 | 1.8 | 1,769.6 |
| 1986 | 801 | 406 | 692.4 | 1.7 | 1493.4 |
| 1987 | 804 | 527 | 639.0 | 1.2 | 1,443.0 |
| 1988 | 1,841 | 322 | 1350.5 | 4.2 | 3,191.5 |
| 1989 | 1,554 | 454 | 1056.7 | 2.3 | 2,610.7 |
| 1990 | 1,405 | 527 | 1497.1 | 2.8 | 2,902.1 |

Source: *Sourcebook of Criminal Justice Statistics 1990.*

Table 5: Heroin/Morphine Related Deaths

| Year | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| 1974 | 1455 | | | | | | | | | | | | | |
| 1975 | 1789 | | | | | | | | | | | | | |
| 1976 | 1597 | | 1437 | | | | | | | | | | | |
| 1977 | 718 | | 616 | | | | | | | | | | 718 | 718 |
| 1978 | 602 | | 505 | | | | | | | | | 562 | 575 | 612 |
| 1979 | 700 | | 424 | | | | | | | | 451 | 445 | 619 | 684 |
| 1980 | 898 | 521 | 492 | | | | | | | | 521 | 521 | 856 | 852 |
| 1981 | 927 | 698 | 659 | | | | | | | 698 | 695 | 695 | 930 | |
| 1982 | 924 | 894 | 831 | | | | | | | 894 | 864 | 828 | | |
| 1983 | 592 | 769 | 728 | | | | | | 771 | 771 | 606 | | | |
| 1984 | | 904 | 979 | | | | | 1114 | 1088 | 1005 | | | | |
| 1985 | | | 1225 | 1392 | | | 1441 | 1442 | 1360 | | | | | |
| 1986 | | | | 1646 | | 1745 | 1701 | 1699 | 1420 | | | | | |
| 1987 | | | | 1599 | 1648 | 1725 | 1677 | 918 | | | | | | |
| 1988 | | | | | 1884 | 1967 | 1100 | | | | | | | |
| 1989 | | | | | 1972 | 1352 | | | | | | | | |

A: *1983 DMP Report*; '82 data has incomplete NYC ME; '83 data is from Jan-Oct only.
B: *1984 DMP*
C: *NIDA DAWN Report Series H, Number 3*; Heroin/Morphine.
D: *NIDA DAWN Report Series G, Number 22*; Heroin/Morphine; excludes NYC.
E: *NIDA DAWN Report Series G, Number 24*; Heroin/Morphine; excludes NYC; '89 data is double first 6 months.
F: *1989 NNICC*; 1989 data incomplete; excludes NYC.
G: *1988 NNICC*; 1988 data appears incomplete, although report does not indicate this; excludes NYC.
H: *1987 NNICC;* 1987 data incomplete; excludes NYC.
I: *1985-86 NNICC*; 1986 data is projection based on first 6 months; excludes NYC.
J: *1984 NNICC*; excludes NYC.
K: *1983 NNICC*; 1983 data incomplete; excludes NYC.
L: *1982 NNICC*; excludes NYC.
M: *1981 NNICC*; total system; 24 SMSAs in '77-78, 26 SMSAs thereafter.
N: *1980 NNICC*; 24 SMSAs; 1980 data is provisional.

## Figure 2: Heroin/Morphine Related Deaths

### All Sources Plotted Together

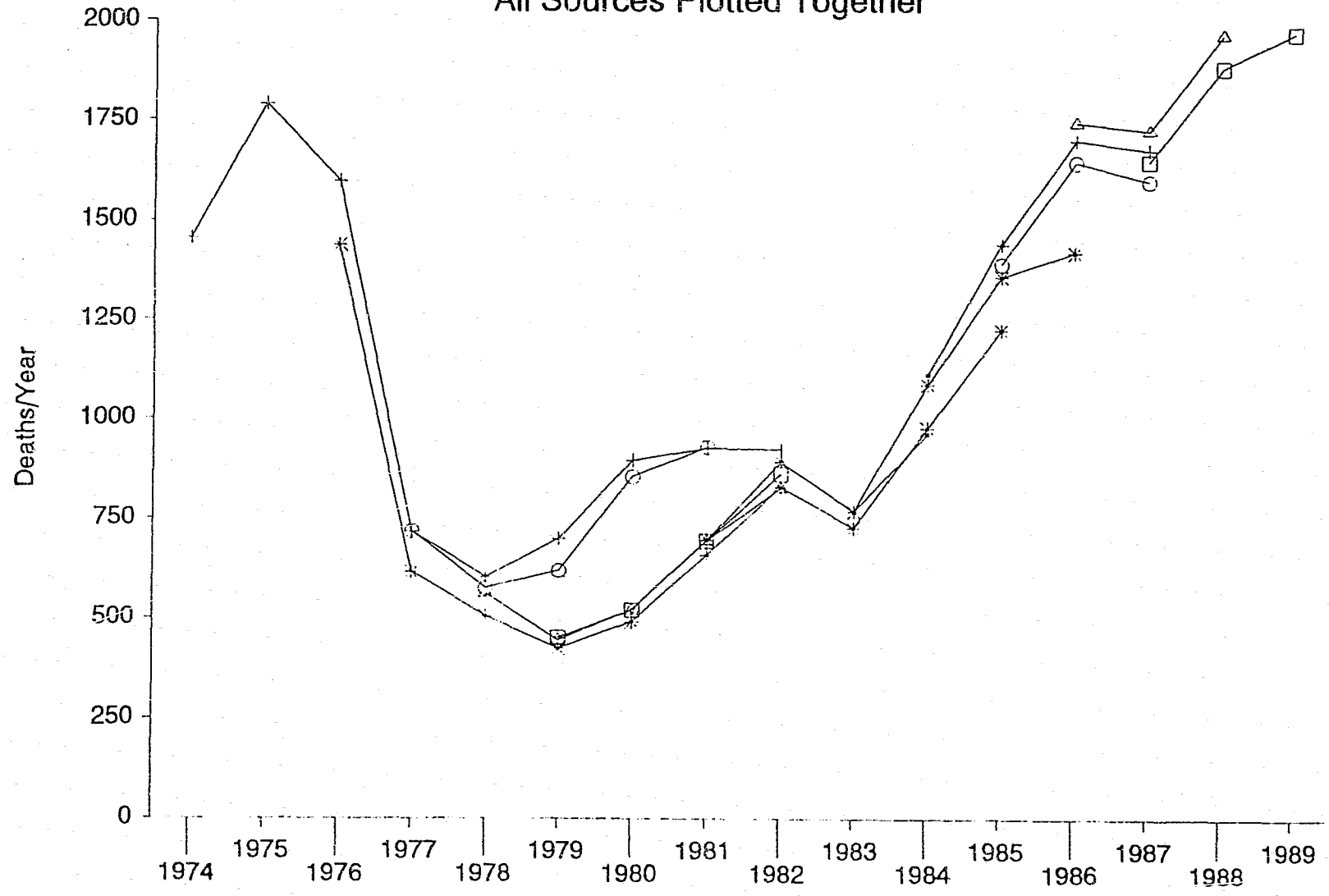


Table 6: Heroin/Morphine Emergency Room Episodes.

| Year | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | |
| 1974 | | 12,860 | | | | | | | | | | | | | | |
| 1975 | | 17,942 | | | | | | | | | | | | | | |
| 1976 | | 18,576 | | 11,556 | | | | | | | | | | | | |
| 1977 | | 8,729 | | 7,296 | | | | | | | | | | | 8,729 | 12,301 |
| 1978 | | 7,071 | | 5,669 | | | | | | | | | | 7,061 | 7,057 | 9,474 |
| 1979 | | 6,956 | | 4,889 | | | | | | | | | 6,956 | 6,956 | 6,822 | 9,715 |
| 1980 | 6,317 | 8,710 | | 5,536 | | | | | | | | | 8,710 | 8,710 | 8,680 | 12,917 |
| 1981 | 7,037 | 9,667 | | 6,057 | | | | | | | | 7,037 | 9,667 | 9,667 | 9,666 | |
| 1982 | 9,967 | 12,648 | | 7,873 | | | | | | | | 9,967 | 12,648 | 12,640 | | |
| 1983 | 11,028 | 12,456 | | 8,490 | | | | | | | 9,178 | 11,028 | 12,456 | | | |
| 1984 | 10,901 | | | 8,934 | | | | | | 8,723 | 9,021 | 10,901 | | | | |
| 1985 | | | | 10,561 | 13,544 | | | | 12,522 | 10,013 | 10,637 | | | | | |
| 1986 | | | 29,289 | | 14,604 | 15,083 | | 13,080 | 13,644 | 10,670 | 11,416 | | | | | |
| 1987 | | | 34,089 | | 16,252 | 16,712 | | 14,087 | 14,550 | 11,390 | | | | | | |
| 1988 | | | 42,685 | | 17,196 | 16,983 | 39,026 | 15,435 | 15,733 | | | | | | | |
| 1989 | | | 46,816 | | | | 41,656 | 15,227 | | | | | | | | |
| 1990 | | | 46,019 | | | | 33,884 | | | | | | | | | |

A: *1984 DMP.*

B: *1983 DMP Report.*

C: *1990 DEA Statistical Report*; nationwide estimates not compatible with other data.

D: *NIDA DAWN Report Series H, Number 3*; Heroin/Morphine.

E: *NIDA DAWN Report Series G, Number 22*; Heroin/Morphine; '85, '88 figures are double first 6 months.

F: *NIDA DAWN Report Series G, Number 24*; Heroin/Morphine; '89 figure is double first 6 months.

G: *NIDA Drug Abuse Warning Network* (October 1991 data file).

H: *1989 NNICC*; Panel of 431 ER rooms.

I: *1988 NNICC*; Panel of 532 ER rooms; '88 figure is a projection from first 9 months.

J: *1987 NNICC*; 1987 data is a projection from first 9 months.

K: *1985-86 NNICC*; 1986 data is a projection from first 9 months.

L: *1984 NNICC.*

M: *1983 NNICC*; total system; '83 data provisional.

N: *1982 NNICC*; total system.

O: *1981 NNICC*; total system; 24 SMSAs in '77-78, 26 SMSAs thereafter.

P: *1980 NNICC*; 24 SMSAs.

## Figure 3: Heroin/Morphine ER Room Data

### All Sources Except DEA Nationwide Estimate

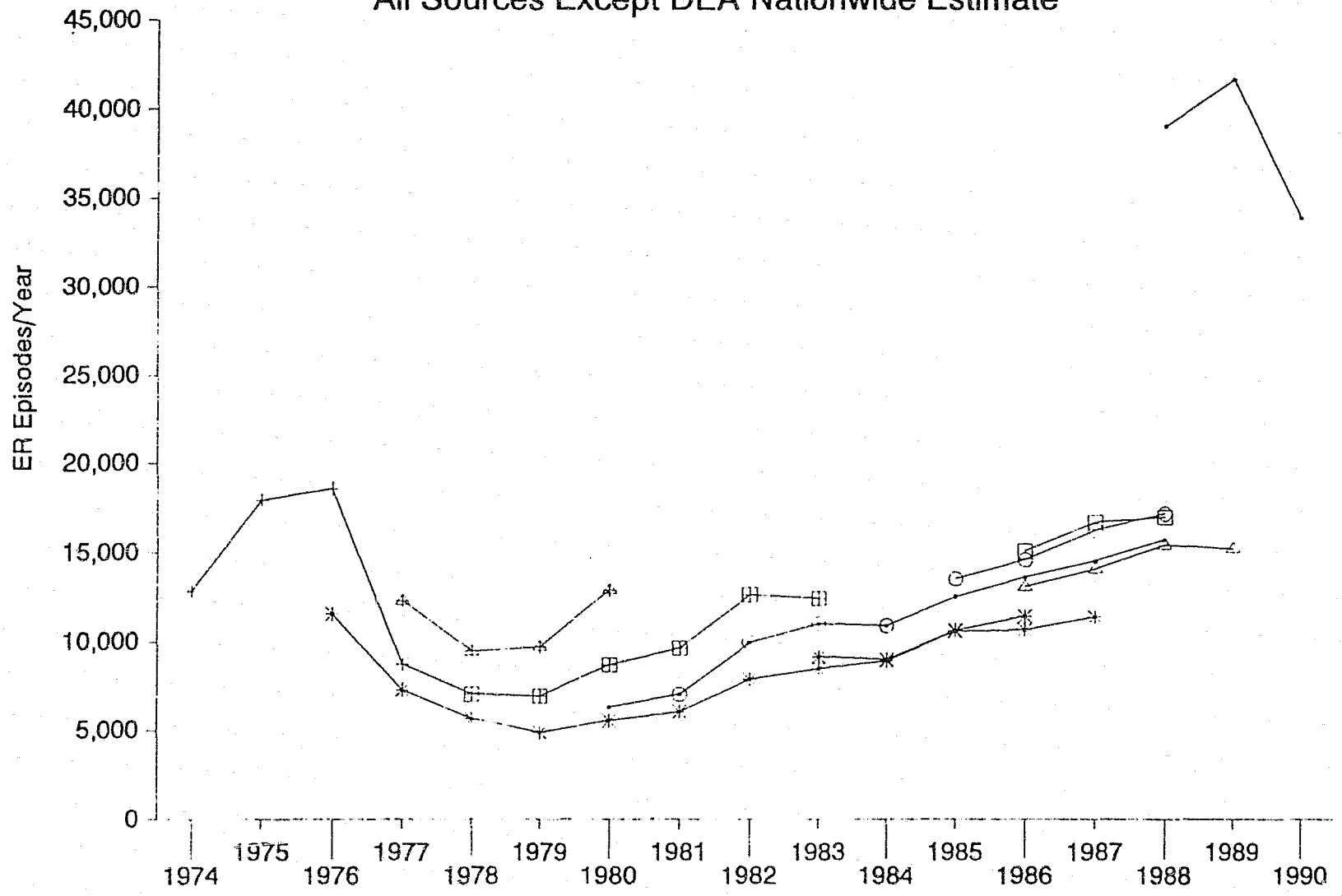


Table 7a: Number Of Emergency Room Admissions Involving Heroin for selected DAWN Metropolitan Areas: 1986 through 1989 Raw Data.

| Metropolitan Area | Year | | | | DAWN Trend 1976-1985 | Current Trend 1986-1989 |
|---|---|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 | | |
| Baltimore | 578 | 849 | 1,031 | 1,012 | NA | Positive |
| Boston | 313 | 565 | 731 | 805 | Negative | Positive |
| Chicago | 835 | 1,270 | 1,626 | 1,617 | Negative | Positive |
| Dallas | 243 | 272 | 249 | 257 | NC | NC |
| Denver | 201 | 115 | 152 | 176 | NC | Negative |
| Detroit | 2,767 | 2,530 | 1,813 | 1,184 | Positive | Negative |
| Los Angeles | 1,883 | 1,415 | 2,075 | 2,260 | Positive | Positive |
| Miami | 297 | 22 | 27 | 49 | Negative | Negative |
| New York | 3,563 | 4,598 | 4,104 | 3,963 | Positive | Positive |
| Newark | 381 | 845 | 1,176 | 1,305 | NA | Positive |
| Philadelphia | 467 | 813 | 1,490 | 1,592 | Positive | Positive |
| Phoenix | 389 | 333 | 302 | 403 | Negative | NC |
| San Antonio | 176 | 127 | 123 | 88 | Positive | Negative |
| San Diego | 183 | 148 | 208 | 350 | Negative | Positive |
| San Francisco | 1,028 | 771 | 982 | 1,640 | NC | Positive |
| Seattle | 439 | 447 | 617 | 644 | Positive | Positive |
| Washington DC | 1,198 | 1,647 | 2,063 | 1,603 | Positive | Positive |

Table 7b: Number Of Emergency Room Admissions Involving Heroin for Selected DAWN Metropolitan Areas 1986 Through 1989 Estimated Missing Providers.

| Metropolitan Area | Year | | | |
|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 |
| Baltimore | 63.4 | 29.0 | 11.0 | 11.0 |
| Boston | 144.8 | 160.3 | 77.0 | 16.5 |
| Chicago | 153.7 | 41.3 | 40.5 | 67.5 |
| Dallas | 15.3 | 16.0 | 2.0 | 8.6 |
| Denver | 10.7 | 8.0 | 8.0 | 1.0 |
| Detroit | 7.8 | 215.0 | 208.0 | 206.5 |
| Los Angeles | 398.5 | 392.8 | 69.7 | 25.7 |
| Miami | 4.5 | 14.3 | 9.0 | 13.8 |
| New York | 1.0 | 9.2 | 37.7 | 40.2 |
| Newark | 26.8 | 15.0 | 5.0 | 19.2 |
| Philadelphia | 281.0 | 247.0 | 12.5 | 41.3 |
| Phoenix | 5.0 | 6.3 | 5.0 | 0.0 |
| San Antonio | 0.0 | 0.0 | 30.0 | 30.0 |
| San Diego | 88.0 | 4.7 | 105.0 | 17.0 |
| San Francisco | 52.8 | 0.0 | 1.0 | 12.5 |
| Seattle | 14.0 | 19.5 | 7.0 | 5.5 |
| Washington DC | 124.0 | 124.0 | 20.7 | 10.0 |

Table 7c: Number Of Emergency Room Admissions Involving Heroin for Selected DAWN Metropolitan Areas 1986 Through 1989 Corrected for Missing Providers.

| Metropolitan Area | Year | | | | DAWN Trend | Current Trend |
|---|---|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 | 1976-1985 | 1986-1989 |
| Baltimore | 641 | 878 | 1,042 | 1,023 | NA | Positive |
| Boston | 458 | 725 | 808 | 822 | Negative | Positive |
| Chicago | 989 | 1,311 | 1,667 | 1,685 | Negative | Positive |
| Dallas | 258 | 288 | 251 | 266 | NC | NC |
| Denver | 212 | 123 | 160 | 177 | NC | NC |
| Detroit | 2,775 | 2,745 | 2,021 | 1,391 | Positive | Negative |
| Los Angeles | 2,282 | 1,808 | 2,145 | 2,286 | Positive | NC |
| Miami | 302 | 36 | 36 | 63 | Negative | Negative |
| New York | 3,564 | 4,607 | 4,142 | 4,003 | Positive | Positive |
| Newark | 408 | 860 | 1,181 | 1,324 | NA | Positive |
| Philadelphia | 748 | 1,060 | 1,503 | 1,633 | Positive | Positive |
| Phoenix | 394 | 339 | 307 | 403 | Negative | NC |
| San Antonio | 176 | 127 | 153 | 118 | Positive | Negative |
| San Diego | 271 | 153 | 313 | 367 | Negative | NC |
| San Francisco | 1,081 | 771 | 983 | 1,653 | NC | NC |
| Seattle | 453 | 467 | 624 | 650 | Positive | Positive |
| Washington DC | 1,322 | 1,771 | 2,084 | 1,613 | Positive | Positive |

Table 8a: Number Of Medical Examiner Deaths Involving Heroin for Selected DAWN Metropolitan Areas 1986 Through 1989 Raw Data.

| Metropolitan Area | Year | | | | DAWN Trend 1976-1985 | Current Trend 1986-1989 |
|---|---|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 | | |
| Baltimore | 26 | 76 | 105 | 41 | NA | Positive |
| Boston | 44 | 18 | 91 | 65 | - - - | Positive |
| Chicago | 38 | 24 | 57 | 151 | Negative | Positive |
| Dallas | 23 | 25 | 26 | 24 | - - - | NC |
| Denver | 17 | 6 | 9 | 7 | - - - | Negative |
| Detroit | 216 | 239 | 104 | 55 | Positive | Negative |
| Los Angeles | 398 | 408 | 463 | 257 | Positive | Negative |
| Miami | 20 | 2 | 8 | 4 | - - - | Negative |
| New York | 49 | 68 | 133 | 75 | NA | Positive |
| Newark | 2 | 105 | 115 | 29 | NA | NC |
| Philadelphia | 117 | 121 | 196 | 193 | Positive | Positive |
| Phoenix | 45 | 27 | 34 | 16 | NC | Negative |
| San Antonio | 50 | 22 | 25 | 42 | - - - | NC |
| San Diego | 86 | 83 | 107 | 87 | NC | NC |
| San Francisco | 149 | 123 | 155 | 140 | Negative | NC |
| Seattle | 32 | 47 | 46 | 25 | - - - | NC |
| Washington DC | 185 | 223 | 246 | 150 | Positive | NC |

Table 8b: Number Of Medical Examiner Deaths Involving Heroin for Selected DAWN Metropolitan Areas 1986 Through 1989 Estimated Cases from Missing Providers.

| Metropolitan Area | Year | | | |
|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 |
| Baltimore | 1.3 | 0.0 | 0.0 | 1.0 |
| Boston | 0.0 | 6.7 | 0.0 | 0.0 |
| Chicago | 3.0 | 3.0 | 2.0 | 1.0 |
| Dallas | 0.0 | 0.0 | 0.0 | 0.0 |
| Denver | 0.0 | 3.0 | 3.0 | 4.7 |
| Detroit | 0.0 | 0.0 | 0.0 | 0.0 |
| Los Angeles | 0.0 | 0.0 | 0.0 | 0.0 |
| Miami | 0.0 | 0.0 | 0.0 | 0.0 |
| New York | 39.5 | 39.5 | 0.0 | 0.0 |
| Newark | 60.7 | 0.0 | 0.0 | 0.0 |
| Philadelphia | 0.0 | 0.0 | 0.0 | 0.0 |
| Phoenix | 0.0 | 0.0 | 0.0 | 0.0 |
| San Antonio | 0.0 | 0.0 | 0.0 | 0.0 |
| San Diego | 0.0 | 0.0 | 0.0 | 0.0 |
| San Francisco | 0.0 | 0.0 | 0.0 | 0.0 |
| Seattle | 4.0 | 0.0 | 0.0 | 0.0 |
| Washington DC | 0.0 | 2.0 | 0.0 | 2.0 |

Table 8c: Number Of Medical Examiner Deaths Involving Heroin for Selected DAWN Metropolitan Areas 1986 Through 1989 Corrected for Missing Providers.

| Metropolitan Area | Year | | | | DAWN Trend | Current Trend |
|---|---|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 | 1976-1985 | 1986-1989 |
| Baltimore | 27 | 76 | 105 | 42 | NA | Positive |
| Boston | 44 | 25 | 91 | 65 | - - - | Positive |
| Chicago | 41 | 27 | 59 | 152 | Negative | Positive |
| Dallas | 23 | 25 | 26 | 24 | - - - | NC |
| Denver | 17 | 9 | 12 | 12 | - - - | Negative |
| Detroit | 216 | 239 | 104 | 55 | Positive | Negative |
| Los Angeles | 398 | 408 | 463 | 257 | Positive | Negative |
| Miami | 20 | 2 | 8 | 4 | - - - | Negative |
| New York | 89 | 108 | 133 | 75 | NA | NC |
| Newark | 63 | 105 | 115 | 29 | NA | NC |
| Philadelphia | 117 | 121 | 196 | 193 | Positive | Positive |
| Phoenix | 45 | 27 | 34 | 16 | NC | Negative |
| San Antonio | 50 | 22 | 25 | 42 | - - - | NC |
| San Diego | 86 | 83 | 107 | 87 | NC | NC |
| San Francisco | 149 | 123 | 155 | 140 | Negative | NC |
| Seattle | 36 | 47 | 46 | 25 | - - - | NC |
| Washington DC | 185 | 225 | 246 | 152 | Positive | NC |

Table 9: Percent Of Emergency Room Admissions Involving Heroin In Which The Heroin Was Injected For Selected DAWN Metropolitan Areas 1986 Through 1989. See Table 8a For Number Of Admissions.

| Metropolitan Area | Year | | | |
|---|---|---|---|---|
| | 1986 | 1987 | 1988 | 1989 |
| Baltimore | 89.4% | 82.7% | 82.7% | 81.0% |
| Boston | 82.7% | 78.9% | 70.5% | 72.0% |
| Chicago | 76.4% | 76.6% | 71.8% | 63.7% |
| Dallas | 69.1% | 66.5% | 73.1% | 71.6% |
| Denver | 93.5% | 87.0% | 75.7% | 70.5% |
| Detroit | 91.3% | 87.1% | 84.1% | 72.3% |
| Los Angeles | 83.5% | 85.6% | 88.0% | 87.6% |
| Miami | 92.6% | 86.4% | 70.4% | 63.3% |
| New York | 87.6% | 76.9% | 75.0% | 79.8% |
| Newark | 87.4% | 86.2% | 84.1% | 75.9% |
| Philadelphia | 85.7% | 77.1% | 83.3% | 68.3% |
| Phoenix | 79.4% | 56.2% | 68.5% | 81.4% |
| San Antonio | 99.4% | 98.4% | 97.6% | 96.6% |
| San Diego | 80.3% | 83.8% | 81.3% | 88.0% |
| San Francisco | 96.5% | 93.5% | 96.6% | 96.1% |
| Seattle | 92.9% | 84.6% | 77.5% | 81.1% |
| Washington DC | 91.1% | 89.1% | 79.3% | 79.4% |

Table 10: Proportion Of DUF Sample With Positive Cocaine Urinalyses

| | New York | | Washington DC | | Portland | | San Diego | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | 0.0% (1) | | | | 0.0% (1) | | |
| 15-20 | 60.6% (170) | 50.7% (219) | | 38.8% (237) | 35.1% (202) | 28.6% (199) | 36.5% (159) | 33.9% (168) |
| 21-25 | 77.4% (288) | 75.9% (349) | | 59.1% (320) | 44.5% (317) | 37.2% (344) | 46.5% (325) | 40.7% (302) |
| 26-30 | 83.0% (265) | 74.2% (356) | | 76.9% (316) | 45.4% (317) | 51.1% (321) | 44.7% (266) | 42.8% (250) |
| 31-35 | 78.2% (188) | 82.3% (260) | | 73.3% (191) | 52.1% (234) | 44.5% (229) | 52.3% (197) | 41.4% (203) |
| 36+ | 65.7% (178) | 65.2% (264) | | 67.5% (240) | 40.4% (270) | 38.8% (255) | 36.7% (196) | 41.8% (244) |
| Total | 74.4% (1,089) | 70.8% (1,449) | | 63.3% (1,304) | 43.8% (1,340) | 40.8% (1,349) | 44.0% (1,143) | 40.5% (1,167) |

| | Indianapolis | | Houston | | Fort Lauderdale | | Detroit | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 10.0% (30) | 18.6% (199) | 39.3% (107) | 39.1% (215) | 34.6% (26) | 37.2% (86) | 42.3% (156) | 29.1% (182) |
| 21-25 | 5.4% (37) | 26.1% (283) | 55.9% (102) | 50.6% (245) | 57.6% (33) | 53.2% (158) | 56.6% (145) | 48.4% (161) |
| 26-30 | 18.4% (49) | 28.2% (234) | 66.3% (89) | 60.2% (226) | 46.0% (50) | 56.5% (161) | 60.3% (131) | 64.4% (163) |
| 31-35 | 35.3% (17) | 26.1% (138) | 51.4% (72) | 59.5% (148) | 45.7% (35) | 59.1% (115) | 53.0% (115) | 62.7% (153) |
| 36+ | 16.3% (43) | 28.0% (175) | 30.1% (83) | 47.7% (176) | 30.6% (49) | 44.1% (136) | 58.7% (126) | 48.4% (186) |
| Total | 15.3% (176) | 25.5% (1,029) | 48.6% (453) | 51.1% (1,010) | 42.5% (193) | 51.1% (656) | 53.8% (673) | 49.9% (845) |

Table 10: Proportion Of DUF Sample With Positive Cocaine Urinalyses

| | New Orleans | | Phoenix | | Chicago | | Los Angeles | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | 100.0% (1) | 0.0% (1) | | |
| 15-20 | 44.4% (252) | 42.2% (251) | 32.1% (165) | 30.4% (158) | 45.5% (224) | 43.1% (137) | 46.2% (221) | 37.2% (113) |
| 21-25 | 54.2% (306) | 59.9% (299) | 31.7% (344) | 37.1% (291) | 61.2% (224) | 58.9% (95) | 60.2% (482) | 53.6% (237) |
| 26-30 | 53.5% (260) | 68.0% (259) | 39.2% (286) | 44.1% (263) | 68.7% (233) | 77.6% (76) | 68.0% (410) | 61.1% (216) |
| 31-35 | 54.0% (150) | 66.4% (214) | 37.1% (210) | 46.6% (189) | 67.2% (174) | 71.4% (63) | 64.9% (299) | 65.8% (161) |
| 36+ | 33.3% (237) | 52.7% (220) | 18.5% (238) | 36.4% (214) | 52.7% (150) | 61.5% (65) | 55.5% (344) | 58.3% (211) |
| Total | 47.9% (1,205) | 57.8% (1,243) | 31.9% (1,243) | 39.3% (1,115) | 59.2% (1,006) | 59.3% (437) | 60.1% (1,756) | 56.5% (938) |

| | Dallas | | Birmingham | | Omaha | | Philadelphia | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | 100.0% (2) | 100.0% (2) | | | | | | |
| 15-20 | 43.6% (195) | 37.6% (245) | 37.2% (43) | 37.8% (119) | 26.3% (19) | | 69.8% (149) | 63.2% (288) |
| 21-25 | 46.7% (259) | 43.7% (373) | 42.9% (112) | 52.3% (218) | 4.5% (22) | | 76.1% (222) | 74.2% (419) |
| 26-30 | 59.1% (235) | 54.4% (362) | 63.8% (94) | 52.7% (245) | 36.4% (22) | | 78.8% (151) | 80.6% (402) |
| 31-35 | 57.5% (167) | 54.7% (190) | 52.0% (75) | 55.0% (160) | 27.3% (11) | | 78.8% (104) | 78.5% (260) |
| 36+ | 36.8% (182) | 39.9% (248) | 44.9% (69) | 48.1% (156) | 11.1% (18) | | 43.9% (123) | 63.1% (260) |
| Total | 49.0% (1,040) | 46.3% (1,420) | 49.4% (393) | 50.2% (898) | 20.7% (92) | | 70.5% (749) | 72.7% (1,629) |

Table 10: Proportion Of DUF Sample With Positive Cocaine Urinalyses

| | Miami | | Cleveland | | San Antonio | | St. Louis | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 44.0% (25) | 55.2% (29) | 40.8% (49) | 42.8% (166) | 15.9% (63) | 18.0% (261) | 29.4% (68) | 41.7% (247) |
| 21-25 | 75.7% (37) | 62.5% (48) | 53.7% (54) | 60.0% (200) | 30.5% (59) | 24.1% (249) | 44.6% (83) | 53.9% (310) |
| 26-30 | 53.3% (45) | 67.9% (53) | 61.0% (41) | 63.5% (192) | 29.1% (79) | 40.1% (267) | 43.3% (67) | 53.0% (287) |
| 31-35 | 82.9% (35) | 71.1% (38) | 63.6% (33) | 61.3% (119) | 21.4% (42) | 31.3% (182) | 28.9% (38) | 47.4% (192) |
| 36+ | 60.0% (40) | 66.0% (47) | 45.5% (33) | 51.6% (122) | 32.9% (70) | 22.3% (292) | 29.6% (71) | 45.1% (182) |
| Total | 63.7% (182) | 65.1% (215) | 52.4% (210) | 56.2% (799) | 26.5% (313) | 26.9% (1,251) | 36.1% (327) | 48.9% (1,218) |

| | Kansas City | | San Jose | |
|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | |
| 15-20 | 33.3% (33) | 30.5% (233) | | 24.4% (90) |
| 21-25 | 49.2% (65) | 57.1% (329) | | 26.9% (175) |
| 26-30 | 58.5% (41) | 63.1% (306) | | 35.7% (171) |
| 31-35 | 53.1% (32) | 58.4% (209) | | 39.0% (100) |
| 36+ | 29.2% (24) | 35.4% (226) | | 27.7% (130) |
| Total | 46.7% (195) | 50.2% (1,303) | | 30.8% (666) |

Table 11: Proportion Of DUF Urinalyses Testing Positive For Opiates

| | New York | | Washington DC | | Portland | | San Diego | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | 0.0% (1) | | | | 0.0% (1) | | |
| 15-20 | 7.6% (170) | 7.8% (219) | | 0.8% (237) | 5.0% (202) | 5.0% (199) | 14.5% (159) | 8.3% (168) |
| 21-25 | 19.1% (288) | 12.9% (349) | | 8.4% (320) | 10.4% (317) | 11.9% (344) | 14.8% (325) | 15.9% (301) |
| 26-30 | 29.1% (265) | 21.1% (356) | | 17.1% (316) | 13.2% (317) | 20.3% (320) | 21.1% (266) | 22.2% (248) |
| 31-35 | 38.3% (188) | 25.0% (260) | | 23.6% (191) | 25.6% (234) | 23.1% (229) | 25.9% (197) | 24.6% (203) |
| 36+ | 29.8% (178) | 24.2% (264) | | 29.6% (240) | 26.7% (270) | 29.0% (255) | 32.1% (196) | 33.3% (243) |
| Total | 24.8% (1,089) | 18.4% (1,449) | | 15.3% (1,304) | 16.2% (1,340) | 18.0% (1,348) | 21.1% (1,143) | 21.3% (1,163) |

| | Indianapolis | | Houston | | Fort Lauderdale | | Detroit | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% (30) | 2.5% (199) | 0.9% (107) | 3.7% (215) | 0.0% (26) | 0.0% (86) | 1.3% (156) | 1.1% (182) |
| 21-25 | 2.7% (37) | 2.5% (283) | 4.9% (102) | 1.2% (245) | 3.0% (33) | 1.9% (158) | 4.1% (145) | 0.6% (161) |
| 26-30 | 0.0% (49) | 2.1% (234) | 3.4% (89) | 5.8% (226) | 6.0% (50) | 1.9% (161) | 8.4% (131) | 4.9% (163) |
| 31-35 | 23.5% (17) | 8.0% (138) | 2.8% (72) | 3.4% (148) | 2.9% (35) | 6.1% (115) | 22.6% (115) | 17.0% (153) |
| 36+ | 7.0% (43) | 5.1% (175) | 7.2% (83) | 13.1% (176) | 8.2% (49) | 2.9% (136) | 34.1% (126) | 17.3% (185) |
| Total | 4.5% (176) | 3.6% (1,029) | 3.8% (453) | 5.1% (1,010) | 4.7% (193) | 2.6% (656) | 13.1% (673) | 8.2% (844) |

Table 11: Proportion Of DUF Urinalyses Testing Positive For Opiates

| | New Orleans | | Phoenix | | Chicago | | Los Angeles | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | 0.0% | 0.0% | | |
| | | | | | (1) | (1) | | |
| 15-20 | 3.2% | 4.0% | 5.5% | 1.3% | 10.3% | 25.5% | 6.8% | 7.1% |
| | (252) | (251) | (165) | (158) | (224) | (137) | (221) | (113) |
| 21-25 | 3.6% | 3.7% | 4.9% | 6.9% | 17.0% | 29.5% | 10.2% | 12.2% |
| | (306) | (299) | (344) | (291) | (224) | (95) | (481) | (237) |
| 26-30 | 5.4% | 3.1% | 9.8% | 12.9% | 20.2% | 30.3% | 15.9% | 13.9% |
| | (260) | (259) | (286) | (263) | (233) | (76) | (410) | (216) |
| 31-35 | 6.7% | 11.2% | 13.8% | 15.3% | 22.4% | 27.0% | 23.7% | 15.5% |
| | (150) | (214) | (210) | (189) | (174) | (63) | (299) | (161) |
| 36+ | 13.1% | 9.5% | 8.8% | 14.0% | 24.0% | 24.6% | 25.6% | 22.7% |
| | (237) | (220) | (238) | (214) | (150) | (65) | (344) | (211) |
| Total | 6.1% | 6.0% | 8.4% | 10.3% | 18.2% | 27.2% | 16.4% | 14.9% |
| | (1,205) | (1,243) | (1,243) | (1,115) | (1,006) | (437) | (1,755) | (938) |

| | Dallas | | Birmingham | | Omaha | | Philadelphia | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | 0.0% | 0.0% | | | | | | |
| | (2) | (2) | | | | | | |
| 15-20 | 2.6% | 4.1% | 4.7% | 0.8% | 0.0% | | 11.4% | 8.3% |
| | (195) | (245) | (43) | (119) | (19) | | (149) | (288) |
| 21-25 | 3.5% | 6.7% | 1.8% | 2.3% | 0.0% | | 8.1% | 9.3% |
| | (259) | (373) | (112) | (218) | (22) | | (222) | (419) |
| 26-30 | 8.5% | 5.2% | 10.6% | 4.5% | 0.0% | | 12.6% | 8.7% |
| | (235) | (362) | (94) | (245) | (22) | | (151) | (402) |
| 31-35 | 10.2% | 12.6% | 9.3% | 7.5% | 9.1% | | 22.1% | 15.0% |
| | (167) | (190) | (75) | (160) | (11) | | (104) | (260) |
| 36+ | 11.0% | 10.1% | 8.7% | 7.7% | 0.0% | | 12.2% | 15.8% |
| | (182) | (248) | (69) | (156) | (18) | | (123) | (260) |
| Total | 6.8% | 7.3% | 6.9% | 4.6% | 1.1% | | 12.3% | 10.9% |
| | (1,040) | (1,420) | (393) | (898) | (92) | | (749) | (1,629) |

Table 11: Proportion Of DUF Urinalyses Testing Positive For Opiates

| | Miami | | Cleveland | | San Antonio | | St. Louis | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 4.0% | 3.4% | 2.0% | 0.0% | 1.6% | 6.1% | 2.9% | 2.4% |
| | (25) | (29) | (49) | (166) | (63) | (261) | (68) | (247) |
| 21-25 | 2.7% | 0.0% | 5.6% | 2.0% | 20.3% | 12.9% | 3.6% | 4.5% |
| | (37) | (48) | (54) | (200) | (59) | (249) | (83) | (309) |
| 26-30 | 0.0% | 1.9% | 0.0% | 1.6% | 19.0% | 22.5% | 4.5% | 6.6% |
| | (45) | (53) | (41) | (192) | (79) | (267) | (67) | (287) |
| 31-35 | 0.0% | 0.0% | 6.1% | 2.5% | 26.2% | 19.8% | 10.5% | 9.3% |
| | (35) | (38) | (33) | (119) | (42) | (182) | (38) | (193) |
| 36+ | 0.0% | 4.3% | 9.1% | 9.0% | 27.1% | 21.6% | 11.3% | 15.4% |
| | (40) | (47) | (33) | (122) | (70) | (292) | (71) | (182) |
| Total | 1.1% | 1.9% | 4.3% | 2.6% | 18.5% | 16.5% | 6.1% | 7.0% |
| | (182) | (215) | (210) | (799) | (313) | (1,251) | (327) | (1,218) |

| | Kansas City | | San Jose | |
|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | |
| 15-20 | 0.0% | 2.6% | | 1.1% |
| | (33) | (233) | | (90) |
| 21-25 | 1.5% | 1.2% | | 3.4% |
| | (65) | (329) | | (175) |
| 26-30 | 4.9% | 2.9% | | 5.3% |
| | (41) | (306) | | (171) |
| 31-35 | 3.1% | 6.2% | | 16.0% |
| | (32) | (209) | | (100) |
| 36+ | 12.5% | 4.0% | | 14.6% |
| | (24) | (226) | | (130) |
| Total | 3.6% | 3.1% | | 7.7% |
| | (195) | (1,303) | | (666) |

Table 12: Proportion Of DUF Sample Which Ever Used Heroin

| | New York | | Washington DC | | Portland | | San Diego | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | 0.0% (1) | | | | 100.0% (1) | | |
| 15-20 | 8.2% (170) | 8.7% (219) | 4.4% | 1.7% (237) | 14.4% (202) | 17.1% (199) | 14.5% (159) | 15.5% (168) |
| 21-25 | 24.7% (288) | 23.2% (349) | 4.8% | 7.5% (320) | 16.7% (317) | 20.3% (344) | 19.4% (325) | 21.9% (302) |
| 26-30 | 41.1% (265) | 30.3% (356) | 11.9% | 21.8% (316) | 30.0% (317) | 33.6% (321) | 27.4% (266) | 40.4% (250) |
| 31-35 | 52.7% (188) | 43.8% (260) | 28.9% | 30.9% (191) | 41.9% (234) | 39.3% (229) | 44.2% (197) | 39.4% (203) |
| 36+ | 47.2% (178) | 48.5% (264) | 31.0% | 44.6% (240) | 41.1% (270) | 45.5% (255) | 44.4% (196) | 44.3% (244) |
| Total | 34.6% (1,089) | 31.1% (1,449) | (327) | 20.2% (1,304) | 28.8% (1,340) | (1,349) | 29.1% (1,143) | 32.6% (1,167) |

| | Indianapolis | | Houston | | Fort Lauderdale | | Detroit | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% (30) | 2.0% (199) | 0.0% (107) | 2.8% (215) | 7.7% (26) | 0.0% (86) | 3.2% (156) | 3.3% (182) |
| 21-25 | 5.4% (37) | 4.6% (283) | 5.9% (102) | 4.1% (245) | 6.1% (33) | 4.4% (158) | 8.3% (145) | 6.8% (161) |
| 26-30 | 18.4% (49) | 10.7% (234) | 10.1% (89) | 7.5% (226) | 10.0% (50) | 11.2% (161) | 13.7% (131) | 19.6% (163) |
| 31-35 | 41.2% (17) | 18.8% (138) | 13.9% (72) | 12.8% (148) | 28.6% (35) | 19.1% (115) | 45.2% (115) | 45.8% (153) |
| 36+ | 14.0% (43) | 20.6% (175) | 8.4% (83) | 16.5% (176) | 12.2% (49) | 18.4% (136) | 59.5% (126) | 58.6% (186) |
| Total | 13.6% (176) | 10.1% (1,029) | 7.1% (453) | 8.0% (1,010) | 13.0% (193) | 11.0% (656) | 24.1% (673) | 27.0% (845) |

Table 12: Proportion Of DUF Sample Which Ever Used Heroin

| | New Orleans | | Phoenix | | Chicago | | Los Angeles | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | 0.0% | 0.0% | | |
| | | | | | (1) | (1) | | |
| 15-20 | 3.6% | 3.6% | 6.1% | 11.4% | 12.5% | 16.1% | 11.8% | 6.2% |
| | (252) | (251) | (165) | (158) | (224) | (137) | (221) | (113) |
| 21-25 | 3.9% | 6.0% | 15.1% | 14.4% | 20.5% | 30.5% | 14.5% | 23.6% |
| | (306) | (299) | (344) | (291) | (224) | (95) | (482) | (237) |
| 26-30 | 11.9% | 10.4% | 20.6% | 27.4% | 36.1% | 30.3% | 24.9% | 32.4% |
| | (260) | (259) | (286) | (263) | (233) | (76) | (410) | (216) |
| 31-35 | 22.7% | 19.2% | 37.1% | 32.3% | 50.6% | 38.1% | 38.1% | 34.8% |
| | (150) | (214) | (210) | (189) | (174) | (63) | (299) | (161) |
| 36+ | 23.2% | 29.1% | 18.9% | 35.0% | 42.0% | 44.6% | 45.6% | 43.6% |
| | (237) | (220) | (238) | (214) | (150) | (65) | (344) | (211) |
| Total | 11.7% | 12.8% | 19.6% | 24.0% | 30.7% | 29.1% | 26.7% | 30.0% |
| | (1,205) | (1,243) | (1,243) | (1,115) | (1,006) | (437) | (1,756) | (938) |

| | Dallas | | Birmingham | | Omaha | | Philadelphia | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | 0.0% | 50.0% | | | | | | |
| | (2) | (2) | | | | | | |
| 15-20 | 5.1% | 4.5% | 4.7% | 0.8% | 0.0% | | 6.7% | 3.1% |
| | (195) | (245) | (43) | (119) | (19) | | (149) | (288) |
| 21-25 | 8.1% | 8.0% | 5.4% | 4.1% | 4.5% | | 5.4% | 10.0% |
| | (259) | (373) | (112) | (218) | (22) | | (222) | (419) |
| 26-30 | 16.6% | 8.0% | 11.7% | 9.4% | 31.8% | | 16.6% | 18.4% |
| | (235) | (362) | (94) | (245) | (22) | | (151) | (402) |
| 31-35 | 25.7% | 18.4% | 26.7% | 18.1% | 9.1% | | 33.7% | 28.8% |
| | (167) | (190) | (75) | (160) | (11) | | (104) | (260) |
| 36+ | 22.0% | 13.3% | 21.7% | 23.1% | 11.1% | | 28.5% | 33.1% |
| | (182) | (248) | (69) | (156) | (18) | | (123) | (260) |
| Total | 14.7% | 9.8% | 13.7% | 10.9% | 12.0% | | 15.6% | 17.6% |
| | (1,040) | (1,420) | (393) | (898) | (92) | | (749) | (1,629) |

Table 12: Proportion Of DUF Sample Which Ever Used Heroin

| | Miami | | Cleveland | | San Antonio | | St. Louis | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% | 17.2% | 0.0% | 4.2% | 7.9% | 10.3% | 4.4% | 4.9% |
| | (25) | (29) | (49) | (166) | (63) | (261) | (68) | (247) |
| 21-25 | 0.0% | 4.2% | 5.6% | 6.0% | 28.8% | 14.5% | 4.8% | 9.7% |
| | (37) | (48) | (54) | (200) | (59) | (249) | (83) | (310) |
| 26-30 | 4.4% | 11.3% | 22.0% | 10.9% | 21.5% | 25.1% | 11.9% | 14.3% |
| | (45) | (53) | (41) | (192) | (79) | (267) | (67) | (287) |
| 31-35 | 17.1% | 7.9% | 24.2% | 21.8% | 47.6% | 29.7% | 28.9% | 30.1% |
| | (35) | (38) | (33) | (119) | (42) | (182) | (38) | (193) |
| 36+ | 17.5% | 17.0% | 45.5% | 29.5% | 28.6% | 28.4% | 31.0% | 30.2% |
| | (40) | (47) | (33) | (122) | (70) | (292) | (71) | (182) |
| Total | 8.2% | 11.2% | 16.7% | 12.8% | 25.2% | 21.3% | 14.7% | 16.1% |
| | (182) | (215) | (210) | (799) | (313) | (1,251) | (327) | (1,219) |

| | Kansas City | | San Jose | |
|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | |
| 15-20 | 3.0% | 3.9% | | 6.7% |
| | (33) | (233) | | (90) |
| 21-25 | 6.2% | 6.4% | | 10.9% |
| | (65) | (329) | | (175) |
| 26-30 | 9.8% | 11.8% | | 16.4% |
| | (41) | (306) | | (171) |
| 31-35 | 21.9% | 17.2% | | 37.0% |
| | (32) | (209) | | (100) |
| 36+ | 20.8% | 19.9% | | 24.6% |
| | (24) | (226) | | (130) |
| Total | 10.8% | 11.3% | | 18.3% |
| | (195) | (1,303) | | (666) |

Table 13: Proportion Of DUF Sample Ever Dependent On Heroin Or Black tar

| | New York | | Washington DC | | Portland | | San Diego | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | 0.0% (1) | | | | 0.0% (1) | | |
| 15-20 | 2.9% (170) | 5.9% (219) | | 0.0% (237) | 3.5% (202) | 5.0% (199) | 6.9% (159) | 4.8% (168) |
| 21-25 | 16.7% (288) | 13.8% (349) | | 4.1% (320) | 6.9% (317) | 6.7% (344) | 9.5% (325) | 10.9% (302) |
| 26-30 | 27.2% (265) | 20.5% (356) | | 8.5% (316) | 13.9% (317) | 15.9% (321) | 17.7% (266) | 16.4% (250) |
| 31-35 | 46.3% (188) | 34.2% (260) | | 19.4% (191) | 22.2% (234) | 21.8% (229) | 28.4% (197) | 20.2% (203) |
| 36+ | 41.0% (178) | 39.0% (264) | | 30.0% (240) | 25.6% (270) | 31.4% (255) | 29.1% (196) | 27.9% (244) |
| Total | 26.2% (1,089) | 22.5% (1,449) | | 11.4% (1,304) | 14.5% (1,340) | 15.9% (1,349) | 17.7% (1,143) | 16.4% (1,167) |

| | Indianapolis | | Houston | | Fort Lauderdale | | Detroit | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% (30) | 0.0% (199) | 0.0% (107) | 0.9% (215) | 0.0% (26) | 0.0% (86) | 0.6% (156) | 0.5% (182) |
| 21-25 | 2.7% (37) | 0.4% (283) | 2.9% (102) | 1.2% (245) | 0.0% (33) | 1.9% (158) | 5.5% (145) | 2.5% (161) |
| 26-30 | 4.1% (49) | 1.3% (234) | 6.7% (89) | 3.1% (226) | 2.0% (50) | 3.7% (161) | 6.9% (131) | 7.4% (163) |
| 31-35 | 17.6% (17) | 2.2% (138) | 4.2% (72) | 1.4% (146) | 5.7% (35) | 7.0% (115) | 30.4% (115) | 24.8% (153) |
| 36+ | 4.7% (43) | 8.0% (175) | 3.6% (83) | 6.8% (176) | 0.0% (49) | 3.7% (136) | 38.1% (126) | 40.9% (186) |
| Total | 4.5% (176) | 2.0% (1,029) | 3.3% (453) | 2.6% (1,010) | 1.6% (193) | 3.4% (656) | 15.0% (673) | 15.5% (845) |

Table 13: Proportion Of DUF Sample Ever Dependent On Heroin Or Black tar

| | New Orleans | | Phoenix | | Chicago | | Los Angeles | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | 0.0% | 0.0% | | |
| | | | | | (1) | (1) | | |
| 15-20 | 1.2% | 0.4% | 2.4% | 1.9% | 3.1% | 9.5% | 4.5% | 2.7% |
| | (252) | (251) | (165) | (158) | (224) | (137) | (221) | (113) |
| 21-25 | 0.7% | 1.0% | 5.2% | 4.5% | 8.0% | 15.8% | 6.4% | 11.0% |
| | (306) | (299) | (344) | (291) | (224) | (95) | (482) | (237) |
| 26-30 | 4.2% | 3.1% | 10.8% | 12.9% | 17.6% | 17.1% | 15.6% | 17.6% |
| | (260) | (259) | (286) | (263) | (233) | (76) | (410) | (216) |
| 31-35 | 11.3% | 7.5% | 20.5% | 15.9% | 26.4% | 25.4% | 23.4% | 19.9% |
| | (150) | (214) | (210) | (189) | (174) | (63) | (299) | (161) |
| 36+ | 15.6% | 10.0% | 10.9% | 19.6% | 26.7% | 32.3% | 31.7% | 28.4% |
| | (237) | (220) | (238) | (214) | (150) | (65) | (344) | (211) |
| Total | 5.8% | 4.0% | 9.8% | 10.9% | 15.1% | 17.8% | 16.2% | 17.0% |
| | (1,205) | (1,243) | (1,243) | (1,115) | (1,006) | (437) | (1,756) | (938) |

| | Dallas | | Birmingham | | Omaha | | Philadelphia | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | 0.0% | 0.0% | | | | | | |
| | (2) | (2) | | | | | | |
| 15-20 | 2.1% | 0.4% | 0.0% | 0.0% | 0.0% | | 3.4% | 1.0% |
| | (195) | (245) | (43) | (119) | (19) | | (149) | (288) |
| 21-25 | 1.2% | 1.9% | 0.0% | 0.5% | 0.0% | | 1.8% | 4.8% |
| | (259) | (373) | (112) | (218) | (22) | | (222) | (419) |
| 26-30 | 5.1% | 3.3% | 0.0% | 1.6% | 4.5% | | 6.6% | 7.5% |
| | (235) | (362) | (94) | (245) | (22) | | (151) | (402) |
| 31-35 | 9.0% | 7.9% | 5.3% | 5.0% | 9.1% | | 18.3% | 17.3% |
| | (167) | (190) | (75) | (160) | (11) | | (104) | (260) |
| 36+ | 9.9% | 5.6% | 8.7% | 11.5% | 5.6% | | 22.0% | 24.6% |
| | (182) | (248) | (69) | (156) | (18) | | (123) | (260) |
| Total | 5.0% | 3.5% | 2.5% | 3.5% | 3.3% | | 8.7% | 9.9% |
| | (1,040) | (1,420) | (393) | (898) | (92) | | (749) | (1,629) |

Table 13: Proportion Of DUF Sample Ever Dependent On Heroin Or Black tar

| | Miami | | Cleveland | | San Antonio | | St. Louis | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% | 0.0% | 0.0% | 1.2% | 1.6% | 3.4% | 0.0% | 1.2% |
| | (25) | (29) | (49) | (166) | (63) | (261) | (68) | (247) |
| 21-25 | 0.0% | 0.0% | 0.0% | 1.5% | 10.2% | 6.8% | 3.6% | 3.2% |
| | (37) | (48) | (54) | (200) | (59) | (249) | (83) | (310) |
| 26-30 | 0.0% | 0.0% | 7.3% | 2.6% | 11.4% | 16.1% | 1.5% | 2.1% |
| | (45) | (53) | (41) | (192) | (79) | (267) | (67) | (287) |
| 31-35 | 2.9% | 0.0% | 0.0% | 10.9% | 26.2% | 18.1% | 7.9% | 9.8% |
| | (35) | (38) | (33) | (119) | (42) | (182) | (38) | (193) |
| 36+ | 5.0% | 0.0% | 24.2% | 18.0% | 21.4% | 18.5% | 16.9% | 19.2% |
| | (40) | (47) | (33) | (122) | (70) | (292) | (71) | (182) |
| Total | 1.6% | 0.0% | 5.2% | 5.6% | 13.4% | 12.5% | 5.8% | 6.0% |
| | (182) | (215) | (210) | (799) | (313) | (1,251) | (327) | (1,219) |

| | Kansas City | | San Jose | |
|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | |
| 15-20 | 0.0% | 0.0% | | 2.2% |
| | (33) | (233) | | (90) |
| 21-25 | 0.0% | 0.0% | | 0.6% |
| | (65) | (329) | | (175) |
| 26-30 | 0.0% | 1.3% | | 4.1% |
| | (41) | (306) | | (171) |
| 31-35 | 3.1% | 4.8% | | 14.0% |
| | (32) | (209) | | (100) |
| 36+ | 12.5% | 6.6% | | 10.8% |
| | (24) | (226) | | (130) |
| Total | 2.1% | 2.2% | | 5.7% |
| | (195) | (1,303) | | (666) |

Table 14: Proportion Of DUF Sample Currently Dependent On Heroin Or Black Tar

| | New York | | Washington DC | | Portland | | San Diego | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | 0.0% (1) | | | | 0.0% (1) | | |
| 15-20 | 2.4% (170) | 4.6% (219) | | 0.0% (237) | 1.0% (202) | 4.0% (199) | 6.3% (159) | 3.6% (168) |
| 21-25 | 9.7% (288) | 8.9% (349) | | 2.8% (320) | 4.1% (317) | 4.4% (344) | 7.4% (325) | 9.9% (302) |
| 26-30 | 17.4% (265) | 14.3% (356) | | 6.3% (316) | 8.2% (317) | 12.1% (321) | 12.8% (266) | 12.0% (250) |
| 31-35 | 27.7% (188) | 21.2% (260) | | 12.0% (191) | 11.5% (234) | 15.3% (229) | 20.8% (197) | 13.8% (203) |
| 36+ | 23.0% (178) | 20.1% (264) | | 19.6% (240) | 16.3% (270) | 21.2% (255) | 23.0% (196) | 21.3% (244) |
| Total | 15.7% (1,089) | 13.8% (1,449) | | 7.6% (1,304) | 8.4% (1,340) | 11.2% (1,349) | 13.5% (1,143) | 12.5% (1,167) |

| | Indianapolis | | Houston | | Fort Lauderdale | | Detroit | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% (30) | 0.0% (199) | 0.0% (107) | 0.9% (215) | 0.0% (26) | 0.0% (86) | 0.0% (156) | 0.0% (182) |
| 21-25 | 0.0% (37) | 0.4% (283) | 2.9% (102) | 0.8% (245) | 0.0% (33) | 0.0% (158) | 2.1% (145) | 0.6% (161) |
| 26-30 | 4.1% (49) | 0.4% (234) | 4.5% (89) | 2.2% (226) | 2.0% (50) | 0.6% (161) | 3.8% (131) | 3.7% (163) |
| 31-35 | 5.9% (17) | 2.2% (138) | 2.8% (72) | 0.7% (148) | 5.7% (35) | 0.0% (115) | 12.2% (115) | 10.5% (153) |
| 36+ | 4.7% (43) | 4.6% (175) | 1.2% (83) | 4.5% (176) | 0.0% (49) | 0.0% (136) | 13.5% (126) | 11.3% (186) |
| Total | 2.8% (176) | 1.3% (1,029) | 2.2% (453) | 1.8% (1,010) | 1.6% (193) | 0.2% (656) | 5.8% (673) | 5.2% (845) |

Table 14: Proportion Of DUF Sample Currently Dependent On Heroin Or Black Tar

| | New Orleans | | Phoenix | | Chicago | | Los Angeles | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | 0.0% | 0.0% | | |
| | | | | | (1) | (1) | | |
| 15-20 | 1.2% | 0.0% | 0.6% | 0.6% | 2.7% | 8.0% | 3.6% | 2.7% |
| | (252) | (251) | (165) | (158) | (224) | (137) | (221) | (113) |
| 21-25 | 0.3% | 0.0% | 2.0% | 3.1% | 4.9% | 11.6% | 5.2% | 6.8% |
| | (306) | (299) | (344) | (291) | (224) | (95) | (482) | (237) |
| 26-30 | 2.3% | 1.5% | 8.0% | 10.6% | 13.7% | 14.5% | 7.6% | 11.1% |
| | (260) | (259) | (286) | (263) | (233) | (76) | (410) | (216) |
| 31-35 | 6.7% | 4.2% | 14.8% | 10.1% | 14.9% | 20.6% | 15.4% | 11.8% |
| | (150) | (214) | (210) | (189) | (174) | (63) | (299) | (161) |
| 36+ | 4.6% | 6.4% | 5.0% | 11.2% | 20.0% | 29.2% | 14.8% | 18.5% |
| | (237) | (220) | (238) | (214) | (150) | (65) | (344) | (211) |
| Total | 2.6% | 2.2% | 6.0% | 7.3% | 10.4% | 14.9% | 9.2% | 10.8% |
| | (1,205) | (1,243) | (1,243) | (1,115) | (1,006) | (437) | (1,756) | (938) |

| | Dallas | | Birmingham | | Omaha | | Philadelphia | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | 0.0% | 0.0% | | | | | | |
| | (2) | (2) | | | | | | |
| 15-20 | 0.5% | 0.4% | 0.0% | 0.0% | 0.0% | | 2.7% | 1.0% |
| | (195) | (245) | (43) | (119) | (19) | | (149) | (288) |
| 21-25 | 0.4% | 1.1% | 0.0% | 0.5% | 0.0% | | 0.9% | 3.3% |
| | (259) | (373) | (112) | (218) | (22) | | (222) | (419) |
| 26-30 | 3.4% | 2.8% | 0.0% | 0.4% | 4.5% | | 5.3% | 4.2% |
| | (235) | (362) | (94) | (245) | (22) | | (151) | (402) |
| 31-35 | 7.2% | 3.7% | 1.3% | 1.9% | 0.0% | | 14.4% | 11.5% |
| | (167) | (190) | (75) | (160) | (11) | | (104) | (260) |
| 36+ | 6.0% | 2.4% | 1.4% | 0.0% | 0.0% | | 10.6% | 11.2% |
| | (182) | (248) | (69) | (156) | (18) | | (123) | (260) |
| Total | 3.2% | 2.0% | 0.5% | 0.6% | 1.1% | | 5.6% | 5.7% |
| | (1,040) | (1,420) | (393) | (898) | (92) | | (749) | (1,629) |

Table 14: Proportion Of DUF Sample Currently Dependent On Heroin Or Black Tar

| | Miami | | Cleveland | | San Antonio | | St. Louis | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% | 0.0% | 0.0% | 0.6% | 1.6% | 3.4% | 0.0% | 0.8% |
| | (25) | (29) | (49) | (166) | (63) | (261) | (68) | (247) |
| 21-25 | 0.0% | 0.0% | 0.0% | 0.5% | 6.8% | 5.2% | 2.4% | 1.6% |
| | (37) | (48) | (54) | (200) | (59) | (249) | (83) | (310) |
| 26-30 | 0.0% | 0.0% | 0.0% | 2.1% | 6.3% | 14.2% | 1.5% | 1.0% |
| | (45) | (53) | (41) | (192) | (79) | (267) | (67) | (287) |
| 31-35 | 0.0% | 0.0% | 0.0% | 1.7% | 16.7% | 15.9% | 2.6% | 4.1% |
| | (35) | (38) | (33) | (119) | (42) | (182) | (38) | (193) |
| 36+ | 2.5% | 0.0% | 9.1% | 9.8% | 14.3% | 14.0% | 9.9% | 9.9% |
| | (40) | (47) | (33) | (122) | (70) | (292) | (71) | (182) |
| Total | 0.5% | 0.0% | 1.4% | 2.5% | 8.6% | 10.4% | 3.4% | 3.0% |
| | (182) | (215) | (210) | (799) | (313) | (1,251) | (327) | (1,219) |

| | Kansas City | | San Jose | |
|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | |
| 15-20 | 0.0% | 0.0% | | 1.1% |
| | (33) | (233) | | (90) |
| 21-25 | 0.0% | 0.0% | | 0.0% |
| | (65) | (329) | | (175) |
| 26-30 | 0.0% | 0.0% | | 2.9% |
| | (41) | (306) | | (171) |
| 31-35 | 0.0% | 1.0% | | 11.0% |
| | (32) | (209) | | (100) |
| 36+ | 8.3% | 1.3% | | 6.9% |
| | (24) | (226) | | (130) |
| Total | 1.0% | 0.4% | | 3.9% |
| | (195) | (1,303) | | (666) |

Table 15: Proportion Of DUF Sample Using Heroin, Black Tar, Or Methadone In The Last Two Days

| | New York | | Washington DC | | Portland | | San Diego | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | 0.0% (1) | | | | 0.0% (1) | | |
| 15-20 | 2.4% (170) | 2.3% (219) | | 0.0% (237) | 4.5% (202) | 0.0% (199) | 11.3% (159) | 2.4% (168) |
| 21-25 | 13.2% (288) | 2.6% (349) | | 2.8% (320) | 5.7% (317) | 1.2% (344) | 8.0% (325) | 2.0% (302) |
| 26-30 | 23.8% (265) | 4.5% (356) | | 2.8% (316) | 9.8% (317) | 2.2% (321) | 15.0% (266) | 1.6% (250) |
| 31-35 | 38.3% (188) | 3.1% (260) | | 4.2% (191) | 20.1% (234) | 3.5% (229) | 23.9% (197) | 3.9% (203) |
| 36+ | 30.9% (178) | 4.5% (264) | | 5.0% (240) | 23.0% (270) | 1.2% (255) | 25.5% (196) | 3.7% (244) |
| Total | 21.3% (1,089) | 3.5% (1,449) | | 2.9% (1,304) | 12.5% (1,340) | 1.6% (1,349) | 15.8% (1,143) | 2.7% (1,167) |

| | Indianapolis | | Houston | | Fort Lauderdale | | Detroit | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% (30) | 0.0% (199) | 0.0% (107) | 0.0% (215) | 0.0% (26) | 0.0% (86) | 0.0% (156) | 0.0% (182) |
| 21-25 | 2.7% (37) | 0.0% (283) | 2.0% (102) | 0.0% (245) | 0.0% (33) | 0.0% (158) | 2.1% (145) | 0.0% (161) |
| 26-30 | 4.1% (49) | 0.4% (234) | 2.2% (89) | 0.0% (226) | 2.0% (50) | 0.0% (161) | 2.3% (131) | 0.6% (163) |
| 31-35 | 11.8% (17) | 1.4% (138) | 1.4% (72) | 0.0% (148) | 0.0% (35) | 0.0% (115) | 16.5% (115) | 2.6% (153) |
| 36+ | 9.3% (43) | 2.9% (175) | 0.0% (83) | 0.0% (176) | 2.0% (49) | 0.0% (136) | 13.5% (126) | 2.2% (186) |
| Total | 5.1% (176) | 0.8% (1,029) | 1.1% (453) | 0.0% (1,010) | 1.0% (193) | 0.0% (656) | 6.2% (673) | 1.1% (845) |

Table 15: Proportion Of DUF Sample Using Heroin, Black Tar, Or Methadone In The Last Two Days

| | New Orleans | | Phoenix | | Chicago | | Los Angeles | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | 0.0% | 0.0% | | |
| | | | | | (1) | (1) | | |
| 15-20 | 1.6% | 0.0% | 0.6% | 0.6% | 5.4% | 0.0% | 4.1% | 0.0% |
| | (252) | (251) | (165) | (158) | (224) | (137) | (221) | (113) |
| 21-25 | 1.3% | 0.0% | 4.7% | 0.7% | 8.9% | 0.0% | 5.2% | 0.0% |
| | (306) | (299) | (344) | (291) | (224) | (95) | (482) | (237) |
| 26-30 | 3.8% | 0.0% | 9.1% | 3.8% | 17.2% | 0.0% | 10.5% | 0.0% |
| | (260) | (259) | (286) | (263) | (233) | (76) | (410) | (216) |
| 31-35 | 8.0% | 1.9% | 16.2% | 2.6% | 22.4% | 0.0% | 19.1% | 0.0% |
| | (150) | (214) | (210) | (189) | (174) | (63) | (299) | (161) |
| 36+ | 5.1% | 1.4% | 6.3% | 1.4% | 22.7% | 0.0% | 19.2% | 0.0% |
| | (237) | (220) | (238) | (214) | (150) | (65) | (344) | (211) |
| Total | 3.5% | 0.6% | 7.4% | 1.9% | 14.4% | 0.0% | 11.4% | 0.0% |
| | (1,205) | (1,243) | (1,243) | (1,115) | (1,006) | (437) | (1,756) | (938) |

| | Dallas | | Birmingham | | Omaha | | Philadelphia | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | 0.0% | 0.0% | | | | | | |
| | (2) | (2) | | | | | | |
| 15-20 | 2.1% | 0.0% | 0.0% | 0.0% | 0.0% | | 2.7% | 0.3% |
| | (195) | (245) | (43) | (119) | (19) | | (149) | (288) |
| 21-25 | 0.8% | 0.3% | 1.8% | 0.0% | 0.0% | | 0.9% | 1.7% |
| | (259) | (373) | (112) | (218) | (22) | | (222) | (419) |
| 26-30 | 5.5% | 0.8% | 0.0% | 0.0% | 4.5% | | 7.3% | 1.5% |
| | (235) | (362) | (94) | (245) | (22) | | (151) | (402) |
| 31-35 | 7.8% | 2.6% | 2.7% | 0.0% | 9.1% | | 16.3% | 1.9% |
| | (167) | (190) | (75) | (160) | (11) | | (104) | (260) |
| 36+ | 7.1% | 0.8% | 0.0% | 0.0% | 0.0% | | 15.4% | 3.5% |
| | (182) | (248) | (69) | (156) | (18) | | (123) | (260) |
| Total | 4.3% | 0.8% | 1.0% | 0.0% | 2.2% | | 7.1% | 1.7% |
| | (1,040) | (1,420) | (393) | (898) | (92) | | (749) | (1,629) |

Table 15: Proportion Of DUF Sample Using Heroin, Black Tar, Or Methadone In The Last Two Days

| | Miami | | Cleveland | | San Antonio | | St. Louis | |
|---|---|---|---|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | | | | | |
| 15-20 | 0.0% | 0.0% | 0.0% | 0.0% | 1.6% | 1.9% | 0.0% | 0.4% |
| | (25) | (29) | (49) | (166) | (63) | (261) | (68) | (247) |
| 21-25 | 0.0% | 0.0% | 0.0% | 0.0% | 8.5% | 1.6% | 2.4% | 1.0% |
| | (37) | (48) | (54) | (200) | (59) | (249) | (83) | (310) |
| 26-30 | 0.0% | 0.0% | 0.0% | 1.0% | 10.1% | 4.1% | 1.5% | 0.3% |
| | (45) | (53) | (41) | (192) | (79) | (267) | (67) | (287) |
| 31-35 | 0.0% | 0.0% | 0.0% | 0.8% | 21.4% | 7.1% | 5.3% | 1.0% |
| | (35) | (38) | (33) | (119) | (42) | (182) | (38) | (193) |
| 36+ | 0.0% | 0.0% | 6.1% | 4.9% | 17.1% | 4.1% | 12.7% | 2.2% |
| | (40) | (47) | (33) | (122) | (70) | (292) | (71) | (182) |
| Total | 0.0% | 0.0% | 1.0% | 1.1% | 11.2% | 3.6% | 4.3% | 0.9% |
| | (182) | (215) | (210) | (799) | (313) | (1,251) | (327) | (1,219) |

| | Kansas City | | San Jose | |
|---|---|---|---|---|
| Age | 1988 | 1989 | 1988 | 1989 |
| 10-14 | | | | |
| 15-20 | 0.0% | 0.4% | | 0.0% |
| | (33) | (233) | | (90) |
| 21-25 | 0.0% | 0.0% | | 0.0% |
| | (65) | (329) | | (175) |
| 26-30 | 2.4% | 0.3% | | 0.0% |
| | (41) | (306) | | (171) |
| 31-35 | 0.0% | 0.0% | | 0.0% |
| | (32) | (209) | | (100) |
| 36+ | 4.2% | 0.0% | | 0.0% |
| | (24) | (226) | | (130) |
| Total | 1.0% | 0.2% | | 0.0% |
| | (195) | (1,303) | | (666) |

Table 16a: 1988 Age Distribution Of First Use Of Heroin Or Black Tar By Year Of First Use For Low Heroin Volume DUF Sites.

| | Period | | | | | |
|---|---|---|---|---|---|---|
| Age | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| Under 15 | 25.0% | 18.2% | 8.7% | 4.9% | 0.0% | 0.0% |
| 15-19 | 46.9% | 53.3% | 50.1% | 31.1% | 31.3% | 23.3% |
| 20-24 | 25.0% | 21.0% | 26.7% | 39.9% | 35.4% | 30.0% |
| 25-29 | 0.0% | 4.7% | 11.4% | 12.6% | 23.6% | 21.1% |
| 30-34 | 3.1% | 2.8% | 1.8% | 71.0% | 7.6% | 20.0% |
| 35 And Over | 0.0% | 0.0% | 1.3% | 4.4% | 2.1% | 5.6% |
| Period N | 32 | 214 | 449 | 183 | 144 | 90 |

Table 16b: 1988 Age Distribution Of First Use Of Heroin Or Black Tar By Year Of First Use For High Heroin Volume DUF Sites.

| | Period | | | | | |
|---|---|---|---|---|---|---|
| Age | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| Under 15 | 29.8% | 22.8% | 9.9% | 5.1% | 0.3% | 0.0% |
| 15-19 | 50.9% | 57.0% | 51.8% | 33.0% | 33.7% | 20.7% |
| 20-24 | 14.0% | 16.1% | 24.6% | 37.6% | 31.8% | 30.6% |
| 25-29 | 3.5% | 3.2% | 10.9% | 15.7% | 19.9% | 25.2% |
| 30-34 | 1.8% | 0.9% | 2.4% | 6.1% | 8.3% | 13.5% |
| 35 And Over | 0.0% | 0.0% | 0.4% | 2.5% | 6.1% | 9.9% |
| Period N | 57 | 316 | 788 | 394 | 362 | 111 |

Table 16c: 1988 Age Distribution Of First Use Of Heroin Or Black Tar By Year Of First Use For All DUF Sites.

| | Period | | | | | |
|---|---|---|---|---|---|---|
| Age | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| Under 15 | 28.1% | 20.9% | 9.5% | 5.0% | 0.2% | 0.0% |
| 15-19 | 49.4% | 55.5% | 51.2% | 32.4% | 33.0% | 21.9% |
| 20-24 | 18.0% | 18.1% | 25.4% | 38.3% | 32.8% | 30.3% |
| 25-29 | 2.2% | 3.8% | 11.1% | 14.7% | 20.9% | 23.4% |
| 30-34 | 2.2% | 1.7% | 2.2% | 6.4% | 8.1% | 16.4% |
| 35 And Over | 0.0% | 0.0% | 0.7% | 3.1% | 4.9% | 8.0% |
| Period N | 89 | 530 | 1,237 | 577 | 506 | 201 |

Table 16d: 1989 Age Distribution Of First Use Of Heroin Or Black Tar By Year Of First Use For Low Heroin Volume DUF Sites.

| | Period | | | | | |
|---|---|---|---|---|---|---|
| Age | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| Under 15 | 11.8% | 19.9% | 9.0% | 6.7% | 2.1% | 0.0% |
| 15-19 | 64.7% | 55.2% | 50.6% | 33.7% | 31.5% | 25.5% |
| 20-24 | 14.7% | 17.1% | 27.3% | 37.2% | 32.9% | 26.6% |
| 25-29 | 8.8% | 5.0% | 7.9% | 14.5% | 21.3% | 26.6% |
| 30-34 | 0.0% | 2.0% | 3.6% | 4.6% | 7.7% | 14.1% |
| 35 And Over | 0.0% | 0.8% | 1.6% | 3.2% | 4.5% | 7.1% |
| Period N | 34 | 357 | 812 | 282 | 286 | 184 |

Table 16e: 1989 Age Distribution Of First Use Of Heroin Or Black Tar By Year Of First Use For High Heroin Volume DUF Sites.

| | Period | | | | | |
|---|---|---|---|---|---|---|
| Age | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| Under 15 | 40.4% | 22.2% | 10.8% | 7.3% | 1.9% | 0.0% |
| 15-19 | 34.0% | 53.3% | 49.0% | 38.6% | 31.1% | 23.9% |
| 20-24 | 17.0% | 19.8% | 27.7% | 30.3% | 30.9% | 33.3% |
| 25-29 | 8.5% | 3.6% | 9.3% | 14.6% | 22.1% | 27.0% |
| 30-34 | 0.0% | 1.2% | 2.0% | 6.8% | 8.5% | 10.8% |
| 35 And Over | 0.0% | 0.0% | 1.2% | 2.3% | 5.5% | 5.0% |
| Period N | 47 | 338 | 751 | 383 | 366 | 222 |

Table 16f: 1989 Age Distribution Of First Use Of Heroin Or Black Tar By Year Of First Use For All DUF Sites.

| | Period | | | | | |
|---|---|---|---|---|---|---|
| Age | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| Under 15 | 28.4% | 21.0% | 9.9% | 7.1% | 2.0% | 0.0% |
| 15-19 | 46.9% | 54.2% | 49.8% | 36.5% | 31.3% | 24.6% |
| 20-24 | 16.0% | 18.4% | 27.5% | 33.2% | 31.7% | 30.3% |
| 25-29 | 8.6% | 4.3% | 8.6% | 14.6% | 21.8% | 26.8% |
| 30-34 | 0.0% | 1.6% | 2.8% | 5.9% | 8.1% | 12.3% |
| 35 And Over | 0.0% | 0.4% | 1.4% | 2.7% | 5.1% | 5.9% |
| Period N | 81 | 695 | 1,563 | 665 | 652 | 406 |

Table 17a: 1988 Distribution Of Relation Between First Use Of Heroin Or Black Tar And First Use Of Cocaine Or Crack For Low Heroin Volume DUF Sites.

| | Period First Used Opiates | | | | | |
|---|---|---|---|---|---|---|
| Relation | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| No Coke | 34.4% | 7.9% | 7.1% | 9.3% | 5.6% | 6.7% |
| Coke First | 0.0% | 2.3% | 10.9% | 32.8% | 54.9% | 67.8% |
| Opiate First | 53.1% | 64.0% | 57.7% | 27.3% | 11.8% | 4.4% |
| Same Year | 12.5% | 25.7% | 24.3% | 30.6% | 27.8% | 21.1% |
| Period N | 32 | 214 | 449 | 183 | 144 | 90 |

Table 17b: 1988 Distribution Of Relation Between First Use Of Heroin Or Black Tar And First Use Of Cocaine Or Crack For High Heroin Volume DUF Sites.

| | Period First Used Opiates | | | | | |
|---|---|---|---|---|---|---|
| Relation | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| No Coke | 0.7% | 6.3% | 5.2% | 5.6% | 10.8% | 9.0% |
| Coke First | 3.5% | 5.1% | 15.5% | 33.2% | 46.1% | 59.5% |
| Opiate First | 64.9% | 60.8% | 45.2% | 25.6% | 11.6% | 0.9% |
| Same Year | 24.6% | 27.8% | 34.1% | 35.5% | 31.5% | 30.6% |
| Period N | 57 | 316 | 788 | 394 | 362 | 111 |

Table 17c: 1988 Distribution Of Relation Between First Use Of Heroin Or Black Tar And First Use Of Cocaine Or Crack For All DUF Sites.

| | Period First Used Opiates | | | | | |
|---|---|---|---|---|---|---|
| Relation | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| No Coke | 16.9% | 7.0% | 5.9% | 6.8% | 9.3% | 8.0% |
| Coke First | 2.2% | 4.0% | 13.8% | 33.1% | 48.6% | 63.2% |
| Opiate First | 60.7% | 62.1% | 49.7% | 26.2% | 11.7% | 2.5% |
| Same Year | 20.2% | 27.0% | 30.6% | 34.0% | 30.4% | 26.4% |
| Period N | 89 | 530 | 1,237 | 577 | 506 | 201 |

Table 17d: 1989 Distribution Of Relation Between First Use Of Heroin Or Black Tar And First Use Of Cocaine Or Crack For Low Heroin Volume DUF Sites.

| Relation | Period First Used Opiates | | | | | |
|---|---|---|---|---|---|---|
| | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| No Coke | 2.9% | 9.0% | 6.3% | 5.7% | 4.5% | 3.3% |
| Coke First | 5.9% | 2.8% | 15.6% | 36.5% | 50.7% | 58.2% |
| Opiate First | 64.7% | 70.9% | 53.8% | 31.6% | 19.9% | 4.9% |
| Same Year | 26.5% | 17.4% | 24.3% | 26.2% | 24.8% | 33.7% |
| Period N | 34 | 357 | 812 | 282 | 286 | 184 |

Table 17e: 1989 Distribution Of Relation Between First Use Of Heroin Or Black Tar And First Use Of Cocaine Or Crack For High Heroin Volume DUF Sites.

| Relation | Period First Used Opiates | | | | | |
|---|---|---|---|---|---|---|
| | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| No Coke | 14.9% | 12.7% | 7.2% | 10.7% | 9.6% | 14.9% |
| Coke First | 2.1% | 5.6% | 14.9% | 31.9% | 42.1% | 55.4% |
| Opiate First | 63.8% | 56.2% | 44.7% | 27.4% | 19.7% | 5.4% |
| Same Year | 19.1% | 25.4% | 33.2% | 30.0% | 28.7% | 24.3% |
| Period N | 47 | 338 | 751 | 383 | 366 | 222 |

Table 17f: 1989 Distribution Of Relation Between First Use Of Heroin Or Black Tar And First Use Of Cocaine Or Crack For All DUF Sites.

| Relation | Period First Used Opiates | | | | | |
|---|---|---|---|---|---|---|
| | Pre 1960 | 1960s | 1970s | 1980-1983 | 1984-1986 | 1987-1989 |
| No Coke | 9.9% | 10.8% | 6.7% | 8.6% | 7.4% | 9.6% |
| Coke First | 3.7% | 4.2% | 15.3% | 33.8% | 45.9% | 56.7% |
| Opiate First | 64.2% | 63.7% | 49.5% | 29.2% | 19.8% | 5.2% |
| Same Year | 22.2% | 21.3% | 28.5% | 28.4% | 27.0% | 28.6% |
| Period N | 81 | 695 | 1,563 | 665 | 652 | 406 |

Table 18: Worldwide Net Opium Production (metric tons) 1987-1991

| Country | 1991 est. | 1990 | 1989 | 1988 | 1987 |
|---|---|---|---|---|---|
| | | | | | |
| Afghanistan | 400 | 415 | 585 | 750 | 600 |
| Iran | 300 | 300 | 300 | 300 | 300 |
| Pakistan | 125 | 165 | 130 | 205 | 205 |
| Total SW Asia | 825 | 880 | 1,015 | 1,255 | 1,105 |
| | | | | | |
| Burma | 2,250 | 2,250 | 2,430 | 1,285 | 835 |
| Laos | 250 | 275 | 375 | 255 | 225 |
| Thailand | 39 | 40 | 50 | 28 | 24 |
| Total SE Asia | 2,539 | 2,565 | 2,855 | 1,568 | 1,084 |
| | | | | | |
| Lebanon | 40 | 32 | 45 | na | na |
| Guatemala | 10 | 13 | 12 | 8 | 3 |
| Mexico | 55 | 62 | 66 | 50 | 50 |
| Total | 65 | 75 | 78 | 58 | 53 |
| | | | | | |
| Worldwide Total | 3,429 | 3,520 | 3,948 | 2,881 | 2,242 |

Source: *International Narcotics Control Strategy Report 1991.*

# Appendix B - Interview Questionnaire

FILE # [ ]

CONTACT NAME: _____ TITLE: _____

AGENCY: _____

TELEPHONE: ( ) _____ FAX: ( ) _____

INTERVIEW DATE: _____ INTERVIEWER: _____

**********

PART I - SURVEY CONTACT PROFILE

CITY

| | | | |
|---|---|---|---|
| 1[ ] NEW YORK | 7[ ] DETROIT | 9[ ] EL PASO | 13[ ] OAKLAND |
| 2[ ] WASHINGTON DC | 6[ ] CHICAGO | 10[ ] DENVER | 14[ ] SEATTLE |
| 3[ ] BOSTON | 7[ ] ATLANTA | 11[ ] SAN DIEGO | 15[ ] LOS ANGELES |
| 4[ ] MIAMI | 8[ ] HOUSTON | 12[ ] SAN FRANCISCO | |

B - PROFESSIONAL AFFILIATION

1[ ] LAW ENFORCEMENT 3[ ] PROSECUTION 5[ ] MEDICAL SERVICES
2[ ] PROBATION/PAROLE 4[ ] TREATMENT/COUNSELING SERVICES

C - JURISDICTION/VENUE

1[ ] CITY/COUNTY 2[ ] STATE 3[ ] FEDERAL

D - HEROIN PROGRAM DATA

1 - DOES YOUR AGENCY PRESENTLY HAVE A HEROIN-SPECIFIC PROGRAM IN OPERATION?

a[ ] YES b[ ] NO

2 - DOES YOUR AGENCY PLAN TO IMPLEMENT A HEROIN-SPECIFIC PROGRAM WITHIN THE NEXT 12 MONTHS?

a[ ] YES c[ ] PROPOSED/REJECTED
b[ ] NO d[ ] PROPOSED/UNDER CONSIDERATION

**********

PART II - PATTERNS OF HEROIN SALES & DISTRIBUTION

1 - WHAT IS THE PRIMARY LOCAL GEOGRAPHICAL AREA WHERE HEROIN IS SOLD FOR INDIVIDUAL USE?

a[ ] URBAN b[ ] SUBURBAN c[ ] RURAL

2 - WHERE DOES THE MAJORITY OF INDIVIDUAL HEROIN TRANSACTIONS TAKE PLACE?

a[ ] RESIDENTIAL  c[ ] PARKS/PUBLIC AREA  e[ ] STREET
c[ ] COMMERCIAL  d[ ] SCHOOL  f[ ] VEHICLE

3 - WHAT PERCENTAGE OF HEROIN TRANSACTIONS TAKE PLACE IN:

a - RESIDENTIAL ____  c - PARKS/PUBLIC AREA ____  e - STREET ____
b - COMMERCIAL ____  d - SCHOOL ____  f - VEHICLE ____

4 - ARE THERE IDENTIFIED ORGANIZATIONAL INFLUENCES PRESENT IN LOCAL HEROIN DISTRIBUTION?

a[ ] YES  b[ ] NO  c[ ] UNKNOWN

5 - YOU ANSWERED "YES"; ARE THE ORGANIZATIONS YOU HAVE IDENTIFIED:

a[ ] STREET GANGS

b[ ] MAJOR ORGANIZED CRIME (e.g.: Mafia, Yazuka, Medellin Cartel, Hells Angels, Rastas, etc.)

IDENTIFY BY NAME: _____
_____

c[ ] OTHER - IDENTIFY: _____

6 - WHAT IS THE GEOGRAPHICAL ORIGIN OF THE ORGANIZED GROUPS WHICH HAVE BEEN IDENTIFIED AS PRINCIPAL HEROIN DISTRIBUTORS? Check all that apply

a[ ] NORTH-AMERICAN ANGLO/WHITE
b[ ] AFRO-AMERICAN/BLACK
c[ ] PACIFIC RIM (China/Japan/Korea/Philippines)
d[ ] MEXICAN NATIONAL
e[ ] CENTRAL AMERICAN NATIONAL (except Mexico)
f[ ] SOUTH AMERICAN NATIONAL
g[ ] CARIBBEAN/WEST INDIES (Jamaica, Cuba, Bahamas, Dominican Rep.)
h[ ] SOUTHWEST ASIA/MEDITERRANEAN (Arabia, Turkey, Pakistan, Iran, India, Nepal, etc.)
i[ ] SOUTHEAST ASIA (Vietnam, Kampuchea, Laos, Burma, Malaysia, etc.)
j[ ] AFRICAN NATIONAL
k[ ] OTHER - IDENTIFY: _____

7 - HOW WOULD YOU CHARACTERIZE THE EXTENT OF THE INFLUENCE LEVEL OF ORGANIZED GROUPS DISTRIBUTING LOCAL HEROIN?

a[ ] LOCAL  b[ ] STATE  c[ ] NATIONAL  d[ ] INTERNATIONAL

8 - WHAT ETHNIC GROUPS ARE INVOLVED IN THE LOCAL SALES OF HEROIN?

a[ ] WHITE - Caucasian/Anglo-Saxon
b[ ] BLACK - African descent/Jamaican/West Indian
c[ ] HISPANIC - Mexican/Chicano/Latino/Puerto Rican/Cuban
d[ ] NATIVE AMERICAN/ALASKAN NATIVE
e[ ] ASIAN/PACIFIC ISLANDERS
f[ ] OTHER - IDENTIFY: _____

9 - WHAT AGE GROUP IS INVOLVED IN LOCAL HEROIN DISTRIBUTION?

a[ ] JUVENILE (under 16 years) _____%
b[ ] YOUNG ADULT (16-25 years) _____%
c[ ] ADULT (over 25 years) _____%

10 - WHAT IS THE APPROXIMATE AMOUNT OF HEROIN SEIZED FROM DISTRIBUTION AND SALES SITES IN THE PAST 12 MONTHS?

a: TOTAL _____/KILOS

b: # OF SEIZURES _____

c: AVERAGE SIZE OF SEIZURE _____/KILOS

11 - IS THIS AN INCREASE IN SEIZURE AMOUNTS SINCE 1986?

a[ ] YES b[ ] NO c[ ] UNKNOWN

12 - AS A PERCENTAGE, WHAT IS YOUR ESTIMATE OF THE RATE OF INCREASE SINCE 1986?

_____%

13 - WHAT IS THE PURITY LEVEL OF HEROIN SEIZURES OVER ONE KILO?

_____%

14 - WHAT IS THE AVERAGE LOCAL WHOLESALE PRICE PER KILO OF HEROIN?

$_____/KILO

15 - WHAT IS THE PURITY LEVEL OF STREET HEROIN SEIZURES?

_____%

16 - WHAT IS THE AVERAGE LOCAL STREET PRICE PER DOSE OF HEROIN?

$_____/DOSAGE UNIT

17 - DURING THE PAST 12-MONTH PERIOD, APPROXIMATELY HOW MANY HEROIN-RELATED CASES HAS YOUR AGENCY RECEIVED?

a[ ] USE _____
b[ ] POSSESSION _____
c[ ] SALES _____
d[ ] DEATH _____
e[ ] EMERGENCY MEDICAL _____
f[ ] OUTPATIENT MEDICAL _____
g[ ] COUNSELING/TREATMENT _____
h[ ] UNKNOWN

18 - WHAT HAS BEEN THE PERCENTAGE OF INCREASE/DECREASE SINCE 1986?

a[ ] INCREASE _____% b[ ] DECREASE _____%

**********

PART III - PATTERNS OF HEROIN USE

1 - APPROXIMATELY HOW MANY HEROIN USERS ARE IN YOUR METROPOLITAN AREA?

_____ (Obtain closest estimate)

2 - WHAT AGE GROUP HAS BEEN IDENTIFIED AS THE PRIMARY LOCAL HEROIN CONSUMER?

a[ ] UNDER 16 YEARS _____%
b[ ] 17-25 YEARS _____%
c[ ] 26-40 YEARS _____%
d[ ] OVER 40 YEARS _____%

3 - APPROXIMATELY WHAT PERCENT OF LOCAL HEROIN USERS ARE MALE? _____%

4 - WHAT PERCENT OF YOUR LOCAL HEROIN USERS ARE IN THE FOLLOWING ETHNIC GROUPS?

a[ ] WHITE _____%
b[ ] BLACK _____%
c[ ] HISPANIC _____%
d[ ] NATIVE AMERICAN/ALASKAN NATIVE _____%
e[ ] ASIAN/PACIFIC ISLANDERS _____%
f[ ] OTHER - IDENTIFY _____ _____%

5 - APPROXIMATELY WHAT PERCENT ARE NEW HEROIN USERS (1 YEAR OR LESS)?

a: _____% b: NUMBER _____

6 - WHAT PERCENT ARE LONG-TERM HEROIN USERS (OVER 1 YEAR)? _____%

7 - ARE YOU SEEING MORE HEROIN USERS WHERE THIS IS THEIR PRIMARY DRUG OF CHOICE?

a[ ] YES b[ ] NO

8 - WHAT ARE THE TOP FIVE DRUGS ABUSED IN YOUR COMMUNITY (IN ORDER OF PRECEDENCE):

| a: CURRENT | b: 1986 |
|---|---|
| 1) _____ | 1) _____ |
| 2) _____ | 2) _____ |
| 3) _____ | 3) _____ |
| 4) _____ | 4) _____ |
| 5) _____ | 5) _____ |

9 - WHAT IS THE MOST COMMON METHOD OF HEROIN ADMINISTRATION?

a[ ] INJECTION _____%
b[ ] ORAL INGESTION _____%
c[ ] SMOKING _____%
d[ ] INHALATION _____%
e[ ] OTHER - DESCRIBE _____

10 - DOES ANY METHOD OF ADMINISTRATION APPEAR TO BE INCREASING?
a[ ] NO
b[ ] YES - DESCRIBE _____

11 - WHAT IS THE AVERAGE PER-USE DOSAGE AMOUNT?
Expressed in grams or portion thereof:

_____/GRAM

12 - WHAT IS THE AVERAGE SIZE HEROIN PURCHASE?

_____/GRAM

13 - WHAT IS THE APPROXIMATE AMOUNT OF HEROIN FOUND IN THE INDIVIDUAL USERS' POSSESSION? (In grams or portion thereof)

_____/GRAM

14 - HAS THERE BEEN AN INCREASE IN LOCAL HEROIN USE SINCE 1986?

a[ ] YES b[ ] DECREASE c[ ] NO CHANGE d[ ] UNKNOWN

15 - AS A PERCENT, WHAT WOULD YOU ESTIMATE HAS BEEN THE RATE OF INCREASE SINCE 1986?

a: _____% b[ ] NOT APPLICABLE c[ ] UNKNOWN

16 - YOU HAVE DESCRIBED AN INCREASE IN HEROIN USE; WHAT MAJOR FACTORS HAVE CONTRIBUTED TO THIS INCREASE? Check all that apply:

a[ ] AVAILABILITY
b[ ] QUALITY
c[ ] QUANTITY
d[ ] PRICE
e[ ] SOCIAL/COMMUNITY ATTITUDES
f[ ] ENFORCEMENT METHODS (priorities, tactics)
g[ ] INTERNAL ENFORCEMENT CONSTRAINTS (fiscal, personnel, policy)
h[ ] EXTERNAL ENFORCEMENT CONSTRAINTS (legal, political, geographical)
i[ ] ECONOMIC CONDITIONS (recession, job loss)
j[ ] OTHER - IDENTIFY _____

17 - YOU HAVE DESCRIBED A DECREASE IN HEROIN USE; WHAT MAJOR FACTORS HAVE CONTRIBUTED TO THIS DECREASE? Check all that apply:

a[ ] ENFORCEMENT (identification, apprehension, conviction, tactics)
b[ ] JUDICIAL POLICY (sentencing, probation, supervision)
c[ ] EDUCATION (community outreach, youth projects, schools)
d[ ] TREATMENT/COUNSELING PROGRAMS
e[ ] SOCIAL/COMMUNITY ATTITUDES
f[ ] PREFERENCE FOR OTHER DRUGS
g[ ] CONCERN FOR HIV/AIDS
h[ ] ECONOMIC (increased cost of heroin)
i[ ] OTHER - IDENTIFY _____

18 - DO YOU CONSIDER THE LOCAL TRENDS IN HEROIN USE INDICATIVE OF A HEROIN CRISIS IN YOUR COMMUNITY?

a[ ] YES b[ ] NO c[ ] UNKNOWN

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PART IV - SUBJECTIVE COMMENTARY

1 - WITHIN YOUR COMMUNITY, WHAT WOULD BE THE MOST EFFECTIVE METHOD OR PLAN TO COMBAT HEROIN ABUSE? BRIEFLY EXPLAIN THE CONCEPT AND RATIONALE:

2 - REFERRALS/NOTES

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BOTEC Analysis
CORPORATION