Epidemiologic Trends in Drug Abuse

Advance Report, June 2000

Community Epidemiology Work Group

National Institutes of Health
National Institute on Drug Abuse

Introduction

This Advance Report is a synthesis of findings that were presented at the 48th meeting of the Community Epidemiology Work Group (CEWG) held in Baltimore, Maryland, on June 13-16, 2000. Sponsored by the National Institutes of Health, National Institute on Drug Abuse (NIDA), the CEWG is a network of epidemiologists and researchers in the United States that meets biannually to review current and emerging substance abuse problems. The members present drug abuse indicator data, survey findings, and other quantitative information compiled from local, city, State, and Federal sources. To assess drug abuse patterns and trends, data from a variety of health and other drug abuse indicator sources are accessed and analyzed. Sources include public health agencies, medical and treatment facilities, medical examiners' and coroners' offices, criminal justice and correctional offices, law enforcement agencies, and sources unique to local areas. Large-scale Federal and other databases used in analyses include the Treatment Episode Data Set (TEDS) maintained by the Substance Abuse and Mental Health Services Administration (SAMHSA); the Drug Abuse Warning Network (DAWN) data on emergency department (ED) drug-related mentions and coroners' reports (SAMHSA); the Arrestee Drug Abuse Monitoring (ADAM) program funded by the National Institute of Justice (NIJ); information on drug seizures, price, and purity from the Drug Enforcement Administration (DEA); the Uniform Crime Reports maintained by the Federal Bureau of Investigation (FBI); and poison control centers. These data are enhanced with qualitative information obtained from ethnographic research, focus groups, and other community-based sources.

Information reported at each CEWG meeting is distributed to drug abuse prevention and treatment agencies, public health officials, researchers, and policymakers. The information is intended to alert authorities at the local, State, regional, and national levels, and the general public, to the current conditions and potential problems so appropriate, timely action can be taken. Researchers also use this information to develop and assess research hypotheses explaining changes in drug use patterns and the characteristics of drug users.

In addition to ongoing assessment of drug patterns and trends in the United States, the CEWG provides a forum for the discussion of drug patterns and trends in other selected areas and regions of the world. Establishing communication and information links with other countries is critical in both monitoring and assessing the global nature of drug problems. Epidemiology work groups on drug abuse, modeled on the CEWG, have been established or are under development in a number of countries and regions of the world.

The international component of the meeting included presentations from researchers and discussions among health officials and academicians from selected countries, including Australia, Canada, Europe, Mexico, and South Africa; cities in East and South Asia; and the Pacific Islands.

Trends in the worldwide production and trafficking of drugs were reported by representatives of the Crime and Narcotics Center, Washington, D.C., and the National Drug Intelligence Center, Johnstown, Pennsylvania.

Reports also were presented on drug abuse surveillance activities and what has been learned by researchers in the host city of Baltimore.

A Dialogue with NIDA's Director

Alan Leshner, Ph.D., Director of the National Institute on Drug Abuse, discussed the role of the CEWG as a drug abuse early warning and monitoring system/network and its ability to provide context, that is a better understanding of the dynamics-how, why, and when a drug epidemic begins and what can be done to ameliorate the problem.

In acknowledging the many contributions made by the CEWG since its inception in 1976, Dr. Leshner noted that the CEWG has identified every major drug abuse epidemic that occurred in this Nation, including the beginning of the crack epidemic in the early 1980s. More recently, in 1987 the CEWG identified and then began tracking the growing abuse of 'club drugs.' Dr. Leshner added that the club drug problem is not an epidemic at the present time. However, the current club drug trend is very serious, since there is evidence that abuse of these drugs is spreading, especially among youth.

Dr. Leshner pointed to NIDA's multimedia campaign as an example of what can be done to address emerging drug problems identified by the CEWG. In response to what was learned from the CEWG about the abuse of club drugs, the campaign was launched with a press conference that involved every major network. This was done in conjunction with a number of collaborators, including student organizations, medical groups, and the National Families Organization. NIDA then issued a "Community Drug Alert," a research report that was sent to 250,000 communities. Also disseminated were small "Go Cards" to 250,000 bars, record stores, and various other venues. In response to demand, another 250,000 of these cards had to be ordered. Three months ago, NIDA also developed a Web site-www.clubdrugs.gov. As of May 10th, 280,000 people had visited the Web site. The Community Drug Alert has been downloaded more than 80,000 times. The CEWG has been given full credit for its essential surveillance role in identifying the emerging problem that gave rise to NIDA's club drug initiatives.

Dr. Leshner posed several questions:

- How can we expand the use of the information generated by the CEWG?
- How can NIDA make better use of the information generated by the CEWG?
- How can we learn more about the contextual settings and events to add greater insight to an "alert"?

Prevention efforts need to be tailored to the contextual realities. In the CEWG reports and discussions, there is a need for more than quantitative trends. There is a need to know what else is going on? What is occurring, contextually, at all levels-from neighborhoods to larger local areas. This will provide the next order of insight. In Dr. Leshner's words, We need to know more than 'a crisis is coming.' We don't want simply to alarm. We want to inform officials and the public in a way that will increase the likelihood that appropriate action will be taken to address the problem.

In the exchange with Dr. Leshner, CEWG members stated that the greatest utility of their information is within their communities. Sometimes findings are "counterintuitive" (e.g., a decrease in the price of a drug does not necessarily lead to a greater use of the drug). Presenting these counterintuitive findings to policymakers has been useful. Attention also was focused on the need to learn how people are getting their information, since the world of communications is changing rapidly. It was suggested that hypotheses generated by the CEWG be used to generate further research at NIDA. It was suggested also that CEWG findings be used to develop and evaluate treatment protocols.

Drug Abuse Highlights for the United States

Data presented at the 48th meeting of the CEWG point to a diversity of drug abuse patterns within and across the 21 CEWG areas, as well as changes in trends over time. The findings are based on 1999 data and comparisons with data from earlier periods. Major findings include:

Indicators of methylenedioxymethamhetamine (MDMA, or ecstasy) are increasing in CEWG areas. Use of the drug is spreading from raves and dance parties to high schools, colleges, and other social settings frequented by youth and young adults.

While MDMA and GHB/GBL indicators are increasing across the 21 CEWG areas, indicators for the major illicit drugs tend to have stabilized or decreased in most areas from 1998 to1999. CEWG data for multiple years show that the indicators are trending downward for the major illicit drugs. The major findings include:

Other "club drugs"-gammahydroxybutyrate (GHB) and its precursor gammabutyrolactone (GBL)-also are appearing increasingly in drug indicators across CEWG areas. GHB was placed in Schedule I of the Controlled Substances Act on March 13, 2000. Availability of these drugs is increasing in CEWG areas, as are cases reported by poison control centers.

Cocaine indicators have trended downward or stabilized in the past few years, as the negative consequences of crack use generated an awareness of its risks among potential users. Recent data show that indicators were stable or mixed in 12 CEWG areas, decreased in 6, and increased in 3.

Heroin indicators were stable in 10 CEWG areas, mixed in 8, and increased in 3. Indicators suggest that injection of heroin is again on the rise. Heroin indicators are increasing among youth in many CEWG areas and there is a growing concern that, as they become more experienced with the drug, youth are turning to injecting for more efficient infusion of heroin.

In the past decade, marijuana indicators have been climbing, as the perception of risk has declined and increasingly potent varieties of cannabis became available. However, in 1999, marijuana indicators-although still high-stabilized in 17 of the 21 CEWG areas, were mixed in 2, and increased in 2.

Methamphetamine indicators continued the decline reported since 1998 in CEWG areas where abuse of this drug has been most problematic. CEWG members identified several interrelated reasons for the decline, including the following:

- **Early warning and attention to the increasing production, trafficking, and abuse of methamphetamine in the western United States, as well as its spread eastward.**
- **Increased prevention/education and law enforcement efforts.**
- **Decreases in the purity and potency of methamphetamine, as precursors needed to make the drug became less available.**

While indicators point to stabilization or decreases

of major illicit drugs in some CEWG areas, ED mentions and arrest indicators of cocaine, heroin, marijuana, and methamphetamine abuse among women increased.

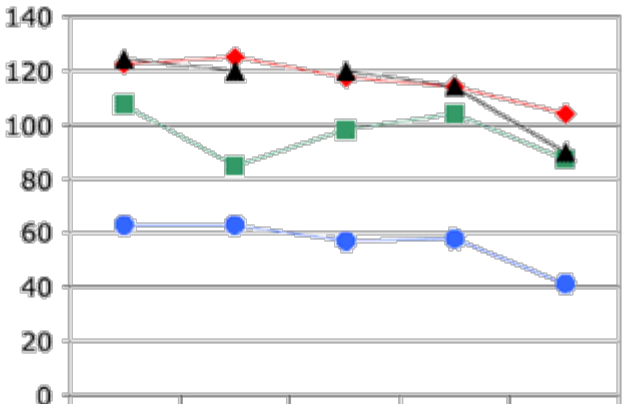
Cocaine/Crack

Cocaine hydrochloride (HCl) and crack cocaine indicators are still at high levels in CEWG areas. However, the most recent data show few signs of increasing abuse of cocaine/crack. Cocaine/crack indicators were stable or mixed in 12 CEWG areas, primarily decreased in 6, and increased in 3.

A comparison of the estimated number of ED cocaine/crack mentions in the first half of 1999 versus the first half of 1998 show significant decreases in 7 of the 20 CEWG areas included in DAWN, and increases in only 2 (Baltimore and Phoenix). Areas with the largest percentage decreases in cocaine/crack ED mentions were San Francisco (27.1 percent); New York City (24.3 percent); Washington, D.C. (24.1 percent); Dallas (20.9 percent); New Orleans (18.1 percent); Atlanta (18 percent); Detroit (10.2 percent); and Chicago (10.1 percent).

The chart below illustrates how rates for cocaine/crack ED mentions have been trending downward in four CEWG areas since 1997.

Rates* of Cocaine/Crack ED Mentions by CEWG Area: DAWN, 1997-1H-1999



	1H-97	2H-97	1H-98	2H-98	1H-99
Chicago	122	125	117	114	104
Detroit	107	85	98	104	87
New York	124	120	120	114	90
San Fran.	63	63	57	58	41

* Per 100,000 population

The CEWG areas that have the highest rates (per 100,000 population) of ED cocaine/crack mentions in the first half of 1999 included:

Baltimore	150
Philadelphia	130
Chicago	104
Miami	97
Atlanta	92
New York	90

The ADAM data tend to show substantial differences in the percentages of adult male versus female arrestees who tested positive for cocaine in 1999, as well as differences by gender in trends over time.

In the 16 CEWG areas where adult male arrestees were tested in 1997, 1998, and 1999, the percentages testing cocaine-positive decreased in 7, remained stable in 6, and increased in 3. In the 13 CEWG areas where female arrestees were tested, the percentages of women testing cocaine-positive decreased in only one site, increased in six, and remained stable in six.

In 12 of the ADAM/CEWG sites where both adult male and female arrestees were tested in 1999, the percentages of women testing positive for cocaine exceeded those for men. The CEWG areas in which the greatest gender differences were found appear in the following chart.

Percent of Male and Female Adult Arrestees Testing Cocaine-Positive: ADAM, 1999

CEWG Area	*Women*	*Men*
New York	65.1	44.2
Chicago	64.3	41.7
Philadelphia	59.8	39.3
Seattle	48.2	33.4
Detroit	45.9	27.0

New Orleans was the only CEWG area where ADAM adult male arrestees (43.8 percent) were more likely than their female counterparts (41.1 percent) to test positive for cocaine; however, the percentage difference in 1999 was much smaller than in previous years.

Heroin

Heroin indicators were stable in 10 CEWG areas, mixed in 8, and increased in 3.

In the 20 CEWG areas included in DAWN, heroin/morphine ED mentions were generally level in 16 from the first half of 1998 to the first half of 1999. Increases were reported only in Miami (24.1 percent) and Baltimore (17.6 percent) and decreases only in Washington, D.C. (19.3 percent) and San Francisco (14.1 percent).

From 1996 to the first half of 1999, trends in heroin/morphine ED mentions varied, as illustrated in the chart below.

Number of Heroin ED Mentions by CEWG Area:

Area	*1996*	*1997*	*1998*	*1H-99*
Increases				
Chicago	6,282	8,633	9,383	4,704
Miami	391	599	722	453
Denver	344	476	509	223
New Orleans	308	431	534	282
Decreases				

New York	11,167	9,491	9,244	4,195
Detroit	3,214	3,046	2,901	1,276
San Francisco	3,157	2,751	2,386	1,151

Across the 16 CEWG areas where adult male arrestees are tested in the ADAM program, there were only 4 in which more than 10 percent of the males tested positive for opiates in 1999: Chicago (20.1 percent); New York City (15.2 percent); Philadelphia (14.8 percent); and New Orleans (13.5 percent). From 1998 to 1999, the opiate-positive rates for male arrestees remained relatively stable in nine of the CEWG areas, increased in four, and decreased in three.

The pattern was substantially different for adult female arrestees from 1998 to 1999. Opiate-positive rates for females increased in eight areas, remained stable in three, and decreased in two. The highest percentages of adult female arrestees testing opiate-positive in 1999 were reported in Chicago (32.4 percent); New York City (21.1 percent); Seattle (20.3 percent); Detroit (16.4 percent); Philadelphia (14.2 percent); Phoenix (11.6 percent); and San Diego (10.9 percent). Female arrestees, as in prior years, continued to be more likely than males to test opiate-positive; this occurred in 1999 in 11 of the 12 areas where both genders were sampled. The one exception was New Orleans, where 13.5 percent of adult males and only 7 percent of adult females tested opiate-positive in 1999. However, the percentage of females testing opiate-positive in New Orleans in 1999 more than doubled from 1998.

Heroin continues to account for a substantial proportion of treatment admissions in some CEWG areas (e.g., 47.8 percent in Baltimore, 43 percent in New York City, and 32 percent in Detroit). Heroin injection appears to be on the rise once again and, in some areas, characterizes a large proportion of primary heroin admissions (e.g., 90 percent in the State of Texas). Indicators continue to suggest that heroin abuse is increasing among youth in CEWG areas. There is growing concern that injection of heroin also may be increasing among youth as they become more experienced and knowledgeable and look for a more efficient infusion of the drug. There is a need to monitor the drug behaviors of young heroin abusers.

Boston *Heroin remains very cheap, pure, and available. A bag of heroin ranges in cost from $6 to $20.*

Detroit *According to the DEA, the price of heroin per pure milligram was $0.62 in 1999-a decrease of nearly 50 percent from 1998. Purity increased in 1999.*

Honolulu *Black tar heroin is readily available in all areas of the State.*

Miami *A 'glut' of very pure South American heroin has resulted in a 50 percent reduction in the wholesale price.*

Mpls./St. Paul *Heroin is increasingly available at extremely high purity levels and at a low cost.*

San Diego *Data from the DEA's Domestic Monitor Program show that, for all time periods covered, San Diego was 1 of 3 areas with the lowest price for heroin and among 10 metro areas with the highest heroin purity level.*

Texas *The male prison survey reported younger inmates were as likely to have shebanged (sprayed heroin intranasally) as to have injected.*

Data from DEA's Domestic Monitor Program (DMP), a heroin purchase activity designed to provide data on the purity, price, and origin of retail-level heroin in major metropolitan areas of the United States, included 18 to 19 CEWG areas in recent years. Data in 18 CEWG areas show that purity of heroin increased in 12, fluctuated in 5, and decreased in 1 between 1996 and 1998. The pattern was essentially unchanged in the second quarter of 1999, when the highest purity levels were found in Philadelphia (71 percent); New York (63.6 percent); Boston (61.4 percent); Newark (60.7 percent); Atlanta (57.8 percent); and San Diego (57.6 percent). Purity levels in other CEWG areas were considerably lower, ranging from 11.8 percent in Dallas to 46.7 percent in Detroit. DMP comparisons of dollars per pure milligram of heroin in 19 CEWG areas from 1996 to 1998 show that the cost decreased in 14, fluctuated in 3, and increased in 2. The pattern was similar in the second quarter of 1999 when the cost of a milligram of heroin continued to vary considerably by area, but remained the highest in New Orleans ($2.26) and St. Louis ($2.42) and the lowest in San Diego (24 cents) and Philadelphia (26 cents). DMP found significant increases in the amount of South American heroin available by 1999, particularly in the northeast. Mexican heroin tended to be more available in CEWG areas outside the northeast.

Marijuana

In 1999, marijuana indicators were stable in 17 of the 21 CEWG areas. Indicators were mixed in two areas (Atlanta and Baltimore) and increased in two (Los Angeles and St. Louis). Despite the stability of certain indicators, marijuana abuse remains a serious problem in CEWG areas. The following excerpts from CEWG reports highlight marijuana patterns.

Atlanta *Marijuana is the second most prevalent drug on the Atlanta market and is increasingly used by a wide variety of people, mostly males, whites, and young people (adolescents and young adults). Two-thirds of the marijuana users admitted to treatment report no additional drug of choice. The cost per ounce ranges between $120 and $240.*

Boston *Marijuana remains widely available in the Boston Metropolitan Statistical Area and throughout Massachusetts, although most indicators have leveled off. Marijuana is often consumed in the form of 'blunts,' as well as in bongs. Marijuana costs between $150 and $250 per ounce.*

Chicago *Marijuana indicators appear to have stabilized in 1998 and 1999. An ounce of marijuana costs between $100 and $200.*

Dallas *ED mentions of marijuana use dropped in 1999.*

Denver *Marijuana continues to be a major problem in Colorado and represents 43.2 percent of treatment admissions. The cost of marijuana ranges between $50 and $100 per ounce.*

Honolulu *The Oahu medical examiner reported 13 mentions in the first half of 1999, compared with only 8 in the last half of 1999. Marijuana treatment admissions increased slightly in the first half of 1999; however, all admissions have been increasing. A 'joint' costs between $3 and $10 and a quarter-ounce of marijuana costs between $100 and $200.*

Los Angeles *Marijuana use continues to increase, based on treatment, ED, and arrest indicators.*

New York *Marijuana activity has sustained a dramatic peak in the number of hospital ED mentions, arrests, and treatment admissions.*

St. Louis *Inner-city marijuana indicators are increasing. DAWN marijuana ED mentions rose 33.3 percent from the last half of 1998 to the first half of 1999. Treatment admissions rose 40.1 percent from the second half of 1998 to the first half of 1999, and another 9.6 percent in the second half of 1999.*

San Francisco *Marijuana use is stable or declining.*

Seattle *Use of marijuana remains unchanged. Marijuana is not readily available as a street drug, and what is generally available is the lower grade commercial product.*

Washington D.C. *ED marijuana mentions remained relatively stable through the first half of 1999. However, treatment admissions declined in the first half of 1999.*

DAWN data from the first half of 1999, when compared to the first half of 1998, show percentage decreases in marijuana/hashish ED mentions in 10 CEWG areas: San Diego (a 34.6 percent decrease); San Francisco (32.5 percent); Boston (28.9 percent); Seattle (28.5 percent); New Orleans (24.6 percent); Dallas (18.4 percent); Denver (15.7 percent); Chicago (12.3 percent); Atlanta (10.9 percent); and New York City (7.6 percent). However, the declines were statistically significant only in Chicago, Dallas, New Orleans, San Diego, and San Francisco.

The same DAWN analyses show percentage increases in eight CEWG areas. The increases were significant in Phoenix (39 percent), Minneapolis/St. Paul (25 percent), and Baltimore (17 percent). ED marijuana/hashish mentions remained relatively stable in the other two CEWG areas included in DAWN.

The rates per 100,000 population in the following chart reflect slightly downward trends in the DAWN ED mentions in five CEWG areas and slightly upward trends in three other areas.

Rates* of Marijuana/Hashish ED Mentions by CEWG Area: DAWN, 1998 - 1H-1999

Area	*1H-98*	*2H-98*	*1H-99*

Decreases			
Chicago	44	41	39
Boston	40	38	28
San Diego	26	22	17
San Francisco	13	12	9
Denver	19	18	16
Increases			
Baltimore	31	34	35
Los Angeles	16	25	28
Mpls./St. Paul	10	11	13
* Per 100,000 population			

The 1998 and 1999 ADAM data from the 16 CEWG areas where adult male arrestees are tested show that the percentages testing marijuana-positive were relatively stable in nine areas, decreased in two, and increased in five. The percentage increases were relatively small in four areas (4 to 7 percent), bringing the proportions of marijuana-positive adult males to 36.2 percent in two areas (Miami and Phoenix) and to 39 percent in another two areas (Los Angeles and Seattle). The percentage increase was greater in Atlanta (18.4 percent); however, Atlanta's adult male sample more than tripled in 1999, making comparison with 1998 equivocal.

The pattern was more striking among adult female arrestees in ADAM. The percentage increases from 1998 to 1999 occurred in 10 of the 13 areas where women were tested in both years. The percentage-point increases were highest in Seattle (9.5 points), Chicago (6.8 points), and Minneapolis/St. Paul (6.4 points).

Across CEWG areas where both adult male and female arrestees were tested in 1999, men were more likely than women to test positive for marijuana. The chart that follows shows the seven CEWG areas where at least 40 percent of the adult males tested marijuana-positive, compared with approximately 26 to 34 percent of the adult females.

Percent of Male and Female Adult Arrestees Testing Marijuana-Positive: ADAM, 1999

CEWG Area	*Women*	*Men*
Detroit	47.9	26.2
Chicago	44.6	26.5
Atlanta	44.4	33.5
Mpls./St. Paul	44.1	29.0
Denver	43.7	34.1
Philadelphia	41.2	25.6
New York	40.8	26.2

In the remaining areas, between 32.3 and 39.6 percent of the adult males tested marijuana-positive, as did between 21 and 29 percent of the adult females.

In all four CEWG areas where juvenile male arrestees were tested in 1999, the ADAM data show that more than half of the youth tested positive for marijuana: 62.2 percent in Phoenix; 58.8 percent in Denver; 52.2 percent in San

Diego; and 51.9 percent in Los Angeles. In the three CEWG areas where juvenile females were tested, sizeable minorities were marijuana-positive: 40.9 percent in San Diego; 40.8 percent in Denver; and 39.8 percent in Phoenix.

Methamphetamine

In most CEWG areas where abuse of this drug has been most problematic, methamphetamine indicators continued the decline which began in 1998.

Mpls./St. Paul *Methamphetamine-related deaths, treatment admissions, and hospital ED mentions declined in 1999. Seizures of meth, clandestine labs, and meth-related arrests increased. Most meth seized by law enforcement was of very low purity, which may explain in part the declining rate of negative health consequences.*

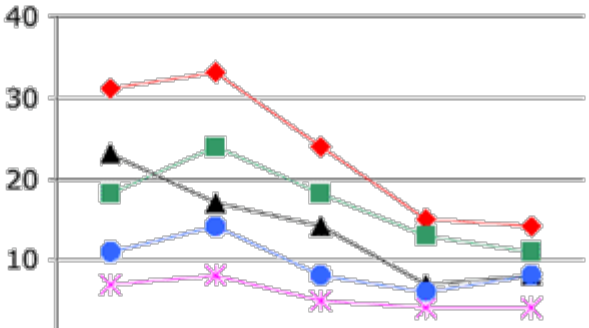
San Diego *Methamphetamine indicators decreased, including treatment admissions, ED mentions, overdose deaths, and arrests (ADAM). Methamphetamine admissions decreased by 4 percent while other admissions increased. Nevertheless, methamphetamine accounted for 32 percent of treatment admissions in 1999. Hispanic admissions for methamphetamine abuse are increasing.*

San Francisco *All indicators of methamphetamine use are down, except for treatment admissions.*

In Honolulu, where abuse of crystal methamphetamine (*ice*) is high, the drug remains a serious problem. Treatment admissions for primary methamphetamine abuse remained *extremely high, totaling 999 in the last half of 1999-an 11 percent increase from the first half of the year.*

DAWN data for the first half of both 1998 and 1999 show decreases in methamphetamine ED mentions in the 5 CEWG areas with the highest methamphetamine mentions per 100,000 population. The decreases were statistically significant in three of the areas-Phoenix, San Diego, and San Francisco. Rates for the five areas are presented in the chart below for 1997, 1998, and the first half of 1999. As shown, rates have been trending downward over this time period.

Rates* of Methamphetamine ED Mentions by CEWG Area: DAWN, 1997-1H-1999



	1H-97	2H-97	1H-98	2H-98	1H-99
San Fran.	31	33	24	15	14
San Diego	18	24	18	13	11
Phoenix	23	17	14	7	8
Seattle	11	14	8	6	8
Los Angles	7	8	5	4	4

In the other 15 CEWG areas included in DAWN, rates remained very low in the first half of 1999 (from 0 to 2 per 100,000 population).

The ADAM data on adult arrestees show few if any methamphetamine-positive arrestees in nine CEWG areas. The 1998-1999 data from six CEWG areas, presented in the chart below, show decreases in the percentages of male arrestees testing methamphetamine-positive in three areas, a slight increase in two, and a substantial increase in one (Seattle). The pattern for females is similar, with the exception of the substantial decrease in Phoenix. San Diego

continued to report the highest percentage of methamphetamine-positive adult arrestees.

Percent of Male and Female Adult Arrestees Testing Methamphetamine-Positive: ADAM, 1998-1999

CITY	*1998*		*1999*	
	M	*F*	*M*	*F*
Dallas	3.3	4.0	2.5	3.2
Denver	5.2	4.6	3.0	2.4
Los Angeles	8.0	11.8	8.9	12.0
Phoenix	16.4	22.4	16.6	14.3
San Diego	33.2	33.3	26.0	36.3
Seattle	6.4	5.2	9.0	9.5

Among the adult arrestees in 1999, whites were more likely than either Hispanics or African-Americans to test positive for methamphetamine. However, in San Diego, more than one-quarter (26 percent) of Hispanic males tested methamphetamine-positive, as did a sizeable minority of Hispanic females (37.3 percent). Also in San Diego, almost half of the white female arrestees and nearly one-third of their male counterparts tested methamphetamine-positive.

In San Diego, high percentages of juvenile arrestees tested positive for methamphetamine-18.2 percent of the females and 15.8 percent of the males.

MDMA *(Ecstasy)*

MDMA, commonly referred to as ecstasy, increasingly appears in the drug indicators across CEWG areas.

Classified as a Schedule I drug under the Controlled Substances Act, MDMA has both stimulant and mild hallucinogenic effects that last 3 to 6 hours when taken orally. The drug is being manufactured in clandestine laboratories throughout Western Europe (primarily the Netherlands and Belgium) and in a limited number of labs in the United States. Significant quantities are produced in tablet, capsule, and powder form. U.S. Customs Officials seized more than 5.4 million hits in the 1999 fiscal year, compared with 750,000 in all of 1998. DEA seized over 216,300 MDMA tablets in the first 5 months of 1999, compared with only 143,600 in all of 1998. There are now established dealers, and a pill that costs pennies to make sells for $20 to $40.

The quality of MDMA may vary significantly, and substitute drugs are often sold when supplies of MDMA cannot meet the demand. The most common adulterants are aspirin, caffeine, and over-the-counter drugs. Other substances sold as MDMA include the cough suppressant DXM (dextromethorphan) and PMA (paramethoxyamphetamine), a potent hallucinogen (at 130 milligram dosage).

While MDMA appears to be safer than other illicit drugs, there are physical risks. In high doses, the drug can cause body temperature to rise as high as 110 degrees, leading to muscle breakdown and kidney and cardiovascular system failure. MDMA use also may lead to heart attacks, strokes, and seizures in some users. Chronic abuse of MDMA appears to produce long-term damage to brain neurons containing serotonin, which, in turn, may cause various behavioral and cognitive problems. In the DAWN program, MDMA ED mentions increased from 626 in 1997 to 1,135 in 1998. MDMA-related deaths have been reported from many areas of the Nation.

MDMA indicators from the CEWG areas attest to the increasing availability and use of MDMA, and to the spread of this drug to younger groups in high schools, colleges, and other social contexts. Use of MDMA no longer appears confined primarily to the rave and dance party scenes. The following are selected excerpts from the CEWG reports.

> **Atlanta** *MDMA use continues to be popular in Atlanta. It has become more available among users age 18 to 25. The price remains stable at $5 to $25. Use remains common at raves and local clubs. Ethnographic research shows that many MDMA users have no idea of the content of the substances they are taking, and that many are using MDMA simultaneously with other substances, including other*

designer drugs and hallucinogens such as LSD (lysergic acid diethhylamide) and mescaline.

Boston *Sharp increases in MDMA use were reported in the Boston metropolitan area. Data from the Massachusetts Poison Control Center, the DEA, State Police, the Substance Abuse Information and Education Helpline, and key informants indicate that MDMA use is rapidly increasing among adolescents and young adults in Boston and throughout Massachusetts. Use seems to be expanding outside the rave, dance, and club scenes to recreational use by younger adolescents in other social contexts.*

Chicago *Ecstasy is the most prominently identified stimulant used in the Chicago area. Use has grown in the past 5 years among young, white, suburban teenagers. Results from the Illinois Youth Survey show recent increases in ecstasy use among high school students in Cook County (4.2 percent) and other parts of the State (5.8 percent). Use of ecstasy in the rave and club scenes has been noted predominantly in Chicago's North Side and suburbs, and along the Indiana border. Reports indicate that 50 to 70 percent of club attendees may be 'rolling on E.'*

Dallas *Use of ecstasy is increasing. MDMA sells for $20 to $25 per dosage unit.*

Detroit *There are increasing reports of MDMA abuse. Ecstasy seizures have been reported throughout the State.*

Miami *MDMA is flooding into South Florida airports from Western Europe. Russian-Eurasian (including Israeli) organized crime groups appear to be the key MDMA operatives in the area. Miami is the transshipment area for MDMA trafficking between Europe and South America. Spain is emerging as a secondary source country in the Miami transit. Ecstasy was mentioned in 12 cases at the Broward County ED in the last half of 1999; all involved young whites.*

Mpls./St. Paul *Ecstasy use was reported as growing among young people. School-based counselors report signs of increasing MDMA use. The Regional Poison Control Center received 15 calls about MDMA in the first 4 months of 1999. Law enforcement also reports increasing MDMA encounters. One court case in Hennepin County involved 7 packs, each containing 1,000 MDMA pills.*

Newark *MDMA is reportedly used at raves and in some college towns across the State, but is not popular in Newark.*

New York *MDMA is 'the new drug on the block.' It is widely available, not only in dance clubs but also on the streets of New York.*

St. Louis *MDMA is increasingly present in St. Louis and is readily available at raves. It sells for $15 to $30 a tablet.*

San Francisco *MDMA use is on the increase, and is concentrated primarily among young people age 15 to 25. Recently, MDMA has been available more often in tablet than capsule form.*

Seattle *Ecstasy use continues to be reported among younger drug users and is frequently identified at local concerts and raves.*

Washington D.C. *Ethnographic research indicates that high-quality MDMA continues to be available under numerous brand names. The well-known brand has been available in tablets that, reportedly, were combined with other substances such as mescaline.*

GNB and GBL

On March 13, 2000, gammahydroxybutyrate (GHB) was placed in Schedule I of the Controlled Substances Act. GHB is easily produced by combining gammabutyrolactone (GBL) with either potassium hydroxide or sodium hydroxide in a container. Kits for making the drug are sold over the Internet. Because the drug is easily synthesized and manufactured, local operators serve as distributors. GHB is usually sold by the capful at a cost of $5 to $10 per cap.

Overdose of GHB can occur rapidly and may produce dizziness, drowsiness, nausea, and visual disturbances. Higher dosages can lead to unconsciousness, seizures, severe respiratory depression, and coma. Overdoses typically require emergency room treatment and, for coma and respiratory depression, intensive care. In 1999, the Food and Drug Administration received 122 reports of GHB abuse from health professionals. The DEA documented 60 GHB-related deaths as of January 2000; almost 60 percent of the deaths occurred among young people age 20 to 29.

GBL, the precursor chemical for the manufacture of GHB, has been marketed as a health supplement and became a List 1 chemical on February 18, 2000. Kits for manufacturing GBL are sold on the Internet. GBL also is synthesized in the body to produce GHB so that some partygoers drink small quantities of GBL "straight." This often causes violent regurgitation of the fluid or other severe reactions.

Ten CEWG members reported on GHB and GBL indicators in their areas.

Atlanta *GHB and Rohypnol (flunitrazepam) are increasingly available and remain the most popular manufactured depressants in Atlanta.*

Boston *The Massachusetts Poison Control Center continued to report that more calls involving GHB and its precursor GBL than was the case for other club drugs. GHB/GBL accounted for 32 percent of illicit drug-related calls.*

Chicago *GHB is sold as a liquid in amounts ranging from drops from a dropper (at raves or parties) to capfuls.*

Detroit *The Detroit Poison Control Center reported 100 cases of GHB/ GBL in 1999, with 22 of these being life-threatening. Six cases involved GHB.*

Los Angeles *GHB use continues to increase in Los Angeles.*

Mpls./St. Paul *Two GHB toxicity deaths occurred in 1999.*

Newark *GHB is routinely used at rave parties and around college campuses. GBL was recently linked to 18 hospitalizations and to 2 overdose deaths among Princeton University students.*

St. Louis *GHB use has increased in the St. Louis area. Its use with alcohol and unpredictable purity present major health risks to users. Five GHB-related deaths were reported in Missouri. GHB is often sold in clubs for $5 a capful or $40 an ounce.*

San Francisco *There are reports that GHB is available but that it is not as commonly used as MDMA.*

Texas *GHB, GBL, and similar precursor drugs remain a serious problem. Increasing cases were reported by poison control centers in 1999. In Houston, GHB sells for $5 to $10 for a cap (one-fourth ounce).*

Drug Abuse Surveillance Issues Presented by Baltimore Researchers

The Maryland Drug Early Warning System (DEWS)

The Maryland Drug Early Warning System (DEWS) is a real-time substance abuse monitoring program in Maryland. Data are collected from four sources-the Offender Population Urinalysis Screening (OPUS), the Maryland Drug Scan, a Rapid Response Field Unit, and Substance Abuse Indicators. The DEWS Action Team, a partnership of 20 State and local agencies, meets regularly to review data and develop action plans. Information is disseminated quickly through a variety of mechanisms to encourage action. By conducting quantitative and qualitative research and linking it to a Statewide network of contacts, the team is able to provide State, county, and local policymakers, program administrators, and community activists with ongoing, timely information about drug use.

Through DEWS, emerging drugs are identified by county. In 1999, ecstasy (MDMA) appeared as an emerging drug in 14 counties and among juvenile offenders in Baltimore City. Ecstasy was less likely to be identified in Baltimore City than in the outlying areas in Baltimore County. Ecstasy is becoming popular among young females. In 2000, oxycodone was identified as another leading emerging drug. So far, the abuse of oxycodone has been reported in eight counties among both youth and adults.

The Self Help in Eliminating Life-Threatening Diseases (SHIELD) Project

This project is structured to develop ethnographic neighborhood biographies, and is still a work in progress. Several methods and strategies are used to assess the physical, social, and culturally centered, but constantly changing, elements of a neighborhood. The methods/ strategies include street outreach (using indigenous workers), field observations, and semistructured field interviews to assess neighborhood developments and trends. To better understand ecological issues, census data and Geographic Information Systems (GIS) are used. The ultimate purpose

of the project is to develop appropriate prevention interventions to counter the human immunodeficiency virus (HIV) that causes the acquired immunodeficiency syndrome (AIDS).

Two Heroin Epidemics in Baltimore

Through an RO1 grant from NIDA, ethnographic methods and trend theory are being used to assess the contextual factors associated with heroin epidemics. According to trend theory, trends are a function of context and heroin risk groups are a function of historical factors. The historical events associated with a drug epidemic are a change in the distribution system, an "openly marginal" population, and a rapid historical change.

In studying the recent heroin epidemic among white users in Baltimore, contacts were made with treatment program personnel and ethnographic interviews were conducted with 15 youth, as well as counselors and others. The findings indicate that several factors are associated with the start of this heroin epidemic: "edge-users" (i.e., youth who will use any substance); "stories" about the drug from networks of peers and friends; experimentation which accelerates use; an epidemic period of experimentation; and shifts or changes in the drug supply and distribution channel that have made heroin more available. Increases in heroin use reflected in recent treatment admissions and arrest data show that Baltimore youth from former manufacturing industrial areas are the most vulnerable group.

The 1960s heroin epidemic also was associated with an influx of the drug. The "openly marginal group" in this case was Baltimore's African-American population, living in an era when expectations were high but opportunities were few for the group.

While heroin epidemics have endured over time, their form has changed. The issue is what can be done to make these drug epidemics less destructive and to respond effectively as they develop.

The Electronic Collaboratory for Investigations About Drugs (ELCID)

ELCID is a collaborative project involving researchers from different areas of the world. Researchers at Johns Hopkins University do the "measurements" and analysis, and exchange data files with people in different countries. The goal is to explain the drug involvement of young people: What transitions do youth make as they go from early to more advanced stages of drug use? The key factor studied is "exposure opportunity." This is tracked through an earlier question asked in the National Household Survey on Drug Abuse. For example, "At what age did you first have an opportunity to use marijuana?" Responses permit a determination of the proportion of youth who will use, once they have an opportunity to do so. An example of the findings comes from Costa Rica, where 18 percent of 1,700 youth reportedly had an opportunity to use marijuana; 9 percent actually used it thereafter. This was a 50 percent probability of use. There were no gender differences when the analysis controlled for opportunity. Other data show that once use begins, the risk for becoming cocaine dependent develops more "explosively" than for marijuana and alcohol, and that the dependency is sustained for many years after first use of cocaine.

Future plans include studying the mechanisms underlying "gateway transitions" in drug use. For example: Why are youth who use one drug more likely to use another? How can we better estimate the opportunity to use marijuana?

International Highlights

East and South Asian Cities

The most recent findings were reported by the Asian Multicity Community Epidemiology Work Group (AMCEWG). Based on indicator data, heroin continues to be the dominant drug of abuse in most East and South Asian cities; however, polydrug abuse has been increasing.

Chasing the dragon (smoking) was the most common route of heroin administration in Pakistan, Sri Lanka, Bangladesh, and Malaysia.

Drugs other than heroin used in Pakistan included cannabis and tranquilizers. In Madras, India, alcohol was the most common substance of abuse. A relatively small proportion of drug abusers in Madras used heroin, and they were more likely to inject the drug.

The vast majority of drug abusers entering treatment in Colombo, Sri Lanka, were heroin abusers. Tranquilizer use reportedly was increasing in this city. Also, there was a significant increase in the number of female drug abusers in

Colombo, but they were not entering treatment.

Heroin and other opiates were the most common drugs of abuse in Dhaka, Bangladesh. Codeine abuse has been increasing in this city and youth are using benzodiazepines.

In Bangkok, Thailand, heroin was reported as the primary drug of abuse by more than three-quarters of the people entering treatment. Injection was the most common route of administration. Methamphetamine use has had a major impact on this city in recent years. Ecstasy is commonly used by truck drivers.

In Kuala Lumpur, Malaysia, heroin is also the drug most commonly reported; however, ecstasy and methamphetamine users are underrepresented in treatment.

Heroin has replaced opium as the primary drug of abuse in Hanoi, Vietnam; however, opium is still the drug of choice for about one-third of the people admitted to treatment. Methamphetamine use also has increased dramatically in recent years. Approximately 70 percent of all HIV cases reported in Hanoi are related to injection drug use.

Drug abuse patterns are much different in Manila, Philippines, than in other Asian cities. The drugs of abuse most commonly reported are methamphetamine (by more than 90 percent of treatment admissions), cannabis, benzodiazepines, and alcohol.

Some limited data also were reported on drug use in Cambodia, Taiwan, and China. Heroin injection reportedly is a serious problem in northern China. HIV seroprevalence rates have been increasing dramatically in this area.

Australia

Although drug abuse patterns vary across States, overall indicators have increased for cocaine, heroin, marijuana, amphetamines (including speed), hallucinogens, and ecstasy. Lifetime use of cocaine has increased in the general population and among treatment populations; data also show increases in the level of cocaine use among treatment clients. Overdose deaths continue to rise among heroin abusers and injection is increasing. Marijuana continues to be the most popular illicit drug of abuse; "past-12-month use" among young females now equals that of their male counterparts. Use of speed is reported by 28 percent of youth in a Brisbane service agency. Also in Brisbane, the production of a new, potent and expensive form of amphetamine-base-is associated with an increase in injection of amphetamines. In Queensland, 46 percent of injection drug users (IDUs) used amphetamine the last time they injected. Using marijuana to "come down" from speed has become common among non-injecting users as well as IDUs. LSD use is increasing among young users of designer drugs. Availability of ecstasy has doubled recently and, as a result, use of the drug is increasing. There is a small "injecting market" for ecstasy and there are a number of dangerous imitations of the drug on the market.

Canada

This presentation focused on differences and similarities in drug use between college under-graduates and 8th, 10th, and 12th grade students in Canada and the United States. Data were derived from the first Canadian Campus Survey (a two-stage cluster selection of 7,800 undergraduates in 5 regions and 20 universities in 1998, available at www.camh.net); the Ontario Student Drug Use Survey (a cross-sectional study conducted every 2 years in middle and high schools); and the Monitoring the Future Study (conducted yearly in the United States in grades 8, 10, and 12, and with students who register in college 1 to 4 years past high school).

Among college students in 1998, four drugs show lower use rates in Canada than in the United States: cannabis (28.7 vs. 35.9 percent); MDMA (2.4 vs. 3.9 percent); LSD (1.8 vs. 4.4 percent); and cocaine (1.6 vs. 4.6 percent). (Heroin and crack rates in Canada were too unstable for estimation.) Canadian undergraduates were more likely than their U.S. counterparts to use hallucinogens other than LSD (8.2 vs. 7.2 percent).

In the 8th, 10th, and 12th grade samples in 1999, students in Ontario and the United States differed little in past-year use of cannabis, MDMA, PCP, crack, heroin, and ice. Use rates for methamphetamine were lower in Ontario than in the United States among 8th graders (3.1 vs. 6.9 percent) and 10th graders (6.1 vs. 10.4 percent), as was use of cocaine among 12th graders (3.6 vs. 6.2 percent). Conversely, use of LSD was higher in Ontario than the United States among 10th graders (10.4 vs. 6 percent); the same was shown for use of other hallucinogens among 8th graders (6.7 vs. 1.5 percent), 10th graders (19.3 vs. 3.2 percent), and 12th graders (18.1 vs. 4.3 percent).

Europe

Drug abuse patterns and trends in Europe are being identified and monitored through the combined efforts of the following:

- Council of Europe-the Pompidou Group
- European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)
- Phare Assistance Program
- European School Project on Alcohol and Other Drugs (ESPAD)

Particular attention is being given to the need for an early warning system to identify emerging drug problems.

Drug use patterns and trends differ across and within European countries. However, cannabis is the most commonly used illicit drug across all countries. The proportions of cannabis users are highest among young people but the use of cannabis is increasing in older populations. Other illicit drugs that are most popular in Europe include amphetamines, ecstasy, and cocaine. Although prevalence in the general population remains low, amphetamines have been increasing in availability and use.

Ecstasy became popular in European countries some time ago, particularly among mainstream youth in the dance and rave scenes. There is increasing evidence that the use of ecstasy has stabilized and is now declining is some countries. Cocaine hydrochloride use may be replacing or supplementing ecstasy use in some areas. There is growing concern that new and more dangerous drug use patterns are emerging among young people in European countries because a wider range of substances are available and polydrug abuse has become more prevalent.

Mexico

Mexico's Epidemiologic Surveillance System of Addictions (SISVEA) has increased its coverage of drug abuse indicators three times over the past 9 years. One-half of the SISVEA cities are at the northern border of Mexico. Data sources include both government treatment centers (GTCs) and non-government treatment centers (NTCs), medical examiners (MEs), juvenile detention centers, and surveys of various populations. The 1999 data show increasing proportions of GTC patients reporting cocaine as their first drug of use; 29 percent of the 1999 patients cited cocaine as their first drug of choice (compared with only 7.7 percent of the NTC patients). Almost 19 percent of 6,614 juvenile infractors reported use of cocaine. Opiates were associated with 10 of the 1,240 deaths reported by MEs. Heroin was the drug of first choice among small proportions of GTC and NTC patients (0.2 and 0.9 percent, respectively) and was used by 0.9 percent of the juvenile infractors. Marijuana was associated with 3.5 percent of deaths (primarily from asphyxiation) and was the first drug of choice for 24 percent of the GTC patients and 30.8 percent of the NTC patients. More than a third (38 percent) of the juvenile infractors used marijuana. Alcohol was associated with almost 89 percent of the deaths reported by MEs, with more than a third being traffic-related. Alcohol was the drug of first choice for 30 percent of the GTC and one-third of the NTC patients. Alcohol was reportedly used by almost 11 percent of the juvenile infractors. Large percentages of treatment patients were polydrug users.

Pacific Islands

Epidemiology surveillance activities have been established in the U.S.-associated Pacific Islands to identify and monitor substance abuse patterns and trends. The islands in which these activities are being coordinated include American Samoa, the Commonwealth of Northern Mariana Islands (CNMI), Guam, the Republic of the Marshall Islands, and the Republic of Palau. Based on recent findings from treatment indicators, alcohol is still the major problem in American Samoa. Marijuana use is common and tobacco use among youth is increasing. The capacity to treat drug-dependent persons is limited.

Alcohol, marijuana, and tobacco use are common, and there has been a resurgence of methamphetamine use in CNMI. There may be different sources (countries) for the methamphetamine currently available. Some drug abuse indicators have been increasing in Guam; however, treatment services are limited. The treatment center serving this island has limited staff and other resources. Arrests for methamphetamine and marijuana-related crimes have been increasing. As a result of court orders, there are currently 413 people on a waiting list for treatment in Guam. Alcohol and tobacco also are the main substances of abuse in the Marshall Islands. Illicit drug abuse is rare in the Marshalls, although there was a recent arrest for cocaine possession. No new data were available from Palau.

South Africa

Information was presented on the status of the South African Community Epidemiology Network on Drug Use (SACENDU) and the most recent findings produced by the network. Multi-source data were collected in Cape Town, Durban, Port Elizabeth, and Gauteng Province (Johannesburg and Pretoria).

Alcohol is the dominant substance of abuse across all sites, although demand for alcohol treatment has been declining. Cannabis indicators have been increasing, as have associated problems. Substantial amounts of cannabis are being cultivated locally. Cannabis and methaqualone (Mandrax), alone or in combination, continued to be the most frequently used illicit drugs in South Africa. Mandrax indicators are particularly high in Durban. Crack reportedly has been replacing Mandrax in some populations. More than 50 kilograms of crack were recently seized in Durban.

The use of club drugs is entrenched in the youth culture. Ecstasy seizures and arrests have increased. There is particular concern about the wide variability in ecstasy purity and quality and the types of adulterants mixed with it. Some tablets have been found to be contaminated. In addition, polydrug abuse has been increasing in all areas, and injection drug use has reportedly been increasing among youth.

Guam and the Commowealth of the Northern Mariana Islands (CNMI)

While alcohol and marijuana are the major substances used in Guam and the CNMI, methamphetamine abuse has been increasing over the last decade. On Guam, approximately half of the clients admitted to treatment in 1997-98 were methamphetamine abusers. Cocaine and heroin abuse were reported for a small proportion of the treatment admissions. Recently completed student surveys show that, on the CNMI, 67.3 percent of students in grades 7-12 have used alcohol during their lifetime, 66.1 percent have smoked tobacco, 48.4 percent have smoked marijuana, and 5.4 percent have tried methamphetamine at least once. The proportions among sampled students on Guam were similar-60.5 percent have used alcohol, 54.9 percent have smoked tobacco, 32.6 percent have smoked marijuana, and 7.2 percent have tried ice.

Papua New Guinea (PNG)

To assess the current drug abuse situation in Papua New Guinea (PNG), the National Narcotics Bureau conducted a Rapid Situation Assessment (RSA) in five provinces during the second half of 1998. Interviews (N = 416) were conducted systematically with key informants, current and former drug users, and community members. Data also were extracted from official records and reports from agencies and individuals.

Betel nut is widely used in PNG-36 percent of the respondents are regular chewers and 25 percent chew occasionally. Females (43 percent) are more likely to chew betel nut than males (34 percent).

Almost three-quarters of the respondents indicated that they consumed four or more alcohol drinks at a time at least once over the prior month. More than half (56 percent) of the respondents reported that they had used cannabis in the prior 12 months.

Cocaine was reported by only five respondents. Approximately 38 percent of the respondents said that they had used both cannabis and homebrew alcohol.

Republic of Palau

Palau's Ministry of Health conducted a substance abuse needs assessment (SANA) in 1997. A key informant methodology was used to collect data on 802 subjects, which is 5.7 percent of the population over the age of 10 years. Eighty direct interviews were conducted to assess the reliability of the survey information. Focus groups were conducted with key informants and interviewers to obtain a more complete profile of substance abusers in the Republic.

Findings showed that betel nut is the most widely used substance in Palau. Most persons chew betel nut with tobacco. Sixty-two percent of the sample had binged (consumed five or more drinks over a short period of time) on alcohol during the past year. Problems drinkers comprised 12.8 percent of the drinking sample. When drinking heavily, Palauans averaged 10 drinks at a sitting. Tobacco, alcohol, marijuana, ice (methamphetamine), and other drugs were used predominantly by males. Few persons had sought treatment for use of substances. A majority of those who did seek treatment sought it from religious leaders.

Trends in Worldwide Narcotics Production

Since 1996, potential cocaine production has steadily declined in the Andean Region. Sharp drops resulting from eradication programs in Bolivia and Peru offset increases in Colombia, where farmers continued to expand coca plantings. In 1999, Andean cultivation could produce 765 metric tons of pure cocaine, a decrease of 7 percent from 1998 levels. Colombia currently cultivates two-thirds of all Andean coca. Most of the cocaine produced by Colombia comes through Mexico to the United States. Cocaine use, however, is increasing in other areas around the world, including Australia, Brazil, and Europe-a factor that may affect availability of cocaine in the United States.

The worldwide production of opium decreased again in 1999 to 3,080 metric tons-the lowest level since 1988. A drought in Southeast Asia reduced the opium crop for the second consecutive year. Afghanistan, recovering from years of conflict with Russia, now accounts for about 55 percent of the world's opium supply.

A drought decreased the cultivation of the poppy crop in Burma, which currently produces 35 percent of the world's supply. There is a concern that if the weather improves in some Southeast Asian countries, a significant increase in opium production will occur. In Mexico, drought and aggressive eradication efforts led to a 35 percent decline in net poppy cultivation in 1999.

It is estimated that there are 980,000 hardcore abusers in the United States. In recent years, heroin has become increasingly available from various sources; it is relatively cheap and purity levels are high. South American heroin is most available in the northeast, the south, and selected north central cities, unlike Mexican black tar and brown heroin varieties, which are distributed (primarily from Los Angeles) in areas west of the Mississippi River. Southeast Asian heroin is available in limited quantities, primarily in the north central region but also in the northeast and south.

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