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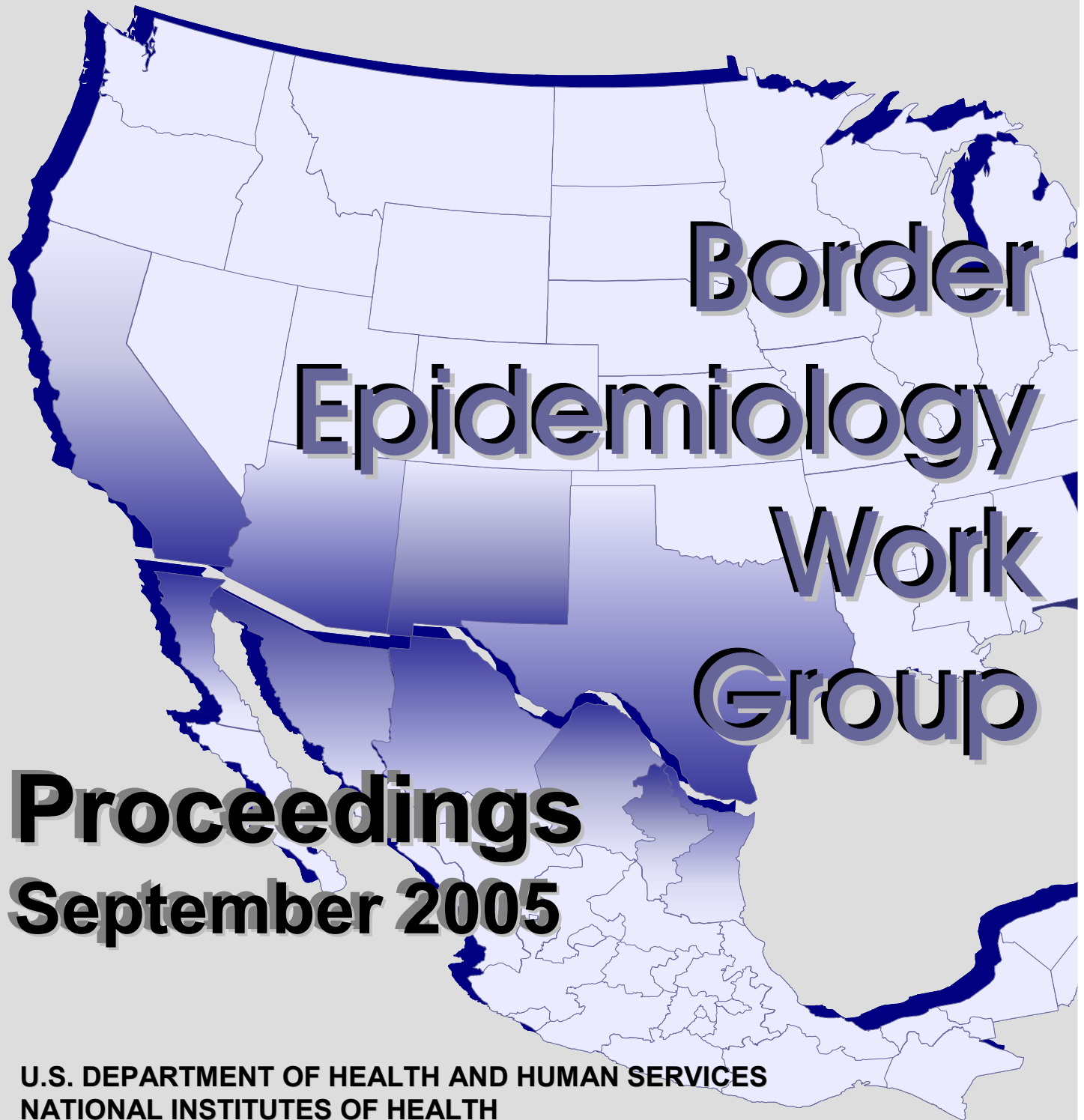
**Proceedings
of the
Border Epidemiology
Work Group**



September 2005

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE ON DRUG ABUSE**

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**Division of Epidemiology, Services and Prevention Research
6001 Executive Boulevard
Bethesda, Maryland 20852**

The National Institute on Drug Abuse (NIDA) acknowledges the contributions made by representatives of the Border Epidemiology Work Group (BEWG) who have voluntarily invested their time and resources in preparing reports presented at the 2005 BEWG meeting. This publication was prepared by MasiMax Resources, Inc., under contract number N01-DA-1-5514 from the National Institute on Drug Abuse.

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National Institute on Drug Abuse

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Foreword

The ninth annual meeting of the Border Epidemiology Work Group (BEWG) was convened in San Antonio, Texas, on September 15–16, 2005. Sponsored by the National Institute on Drug Abuse (NIDA), United States, and the Ministry of Health of Mexico (MHM), the BEWG represents the collaborative efforts of researchers from both sides of the U.S.-Mexico border. Through annual meetings and ongoing communication, BEWG members identify drug abuse patterns and trends within and across border cities and areas. Of special interest are drug abuse patterns and problems in *sister cities/areas* (i.e., jurisdictions in close geographic proximity to one another).

Over the years, the BEWG has continued to evolve as a surveillance network. The work group has addressed emerging drug abuse issues that have implications for both countries. For the September 2005 meeting, several themes were the focus of presentations and discussions...

- Changing drug abuse patterns and trends

- The impact of current drug trafficking and distribution patterns
- The association between injection drug use and HIV/AIDS

Participants discussed the findings and implications of the data and the importance of using data sources from both sides of the border to investigate areas of common interest. Together, participants discussed data sources that are available for future research to enhance the BEWG's current coverage of these drug abuse-related issues.

The BEWG annual meetings continue to provide a forum for researchers to present, exchange, and review drug abuse data and information from existing sources on both sides of the border. In sharing both historical data/information and that on current and emerging trends in drug abuse and related issues with other government and nongovernment border organizations, the information becomes more valuable in developing and targeting appropriate prevention, treatment, and law enforcement interventions.

Moirá P. O'Brien
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Contents

Foreword.....	iii
Highlights of the 2005 BEWG Meeting	1
EPIDEMIOLOGY OF DRUG ABUSE: MEXICAN REPORTS	
Drug Abuse Among Patients in Nongovernment Treatment Centers in the Northern Border of Mexico <i>Patricia Cravioto, Ph.D., Pablo Kuri, M.D., Mario Cortes, M.Sc., Fernando Galvan, M.Sc.,</i> <i>and Roberto Tapia-Conyer, Ph.D.</i>	7
Cocaine Users and the Utilization of Services in Ciudad Juarez, Chihuahua <i>Patricia Cravioto, Ph.D., Fernando Galvan, M.Sc., Blanca Jimenez, and Roberto Tapia-Conyer, Ph.D.</i>	10
Drug Use Among Migrants on the Mexico-U.S. Border <i>Jose Angel Prado, Ph.D.</i>	12
Drug Use and Risky Sexual Behaviors Among Mexican School Students <i>Jorge A. Villatoro Velazquez, M.C., Ma. Elena Medina-Mora, Maria de Lourdes Gutierrez-Lopez,</i> <i>Clara Fleiz Bautista, and Nancy Amador-Buenabad</i>	14
Epidemiologic View of AIDS and New Data on Injection Drug Use Along the Border <i>Mario Cortés, M.Sc., Patricia Cravioto, Ph.D., Pablo Kuri, M.D., and Fernando Galván, M.Sc.</i>	17
EPIDEMIOLOGY OF DRUG ABUSE: U.S. REPORTS	
Drug Abuse on the Arizona-Mexico Border <i>Jenny Chong, Ph.D., and Darlene Lopez, M.S.</i>	23
Drug Use on the New Mexico Border <i>Nina G. Shah, M.S.</i>	27
Drug Abuse Patterns and Trends in San Diego, California <i>Steffanie Strathdee, Ph.D.</i>	30
Drug Use on the Border <i>Jane C. Maxwell, Ph.D.</i>	32
PARTICIPANTS	
BEWG Meeting Participant List	45

Highlights of the 2005 BEWG Meeting

At the 2005 Border Epidemiology Work Group (BEWG) meeting, participants presented updated data on methamphetamine abuse patterns and trends, following up on the methamphetamine abuse focus of the 2004 BEWG meeting. In addition, abuse indicators for other drugs (e.g., heroin, cocaine, marijuana) were reported by representatives of different geographic areas. Discussions focused on drug abuse patterns and trends; the connection between injection drug use and HIV/AIDS; methodological issues confronted in accessing and analyzing data on drug abuse patterns and trends along the U.S.-Mexico border; and questions that need to be addressed in future research. Findings presented and highlights of the discussions are summarized below.

KEY FINDINGS ON DRUGS OF ABUSE

Treatment data from nongovernment treatment centers (NGCs) in Mexico in the first half of 2005 and that from border areas in the United States in 2004 show substantial variations by drug and by region...

Methamphetamine

- In western regions along the U.S.-Mexico border, high proportions of drug abusers entering treatment were primary methamphetamine abusers: 36 percent in Mexico's West Region, 36 percent in San Diego, and 41 percent in Yuma County, Arizona, which borders California.
- In central border areas, the proportions of primary methamphetamine treatment admissions varied considerably: 0.2 percent of Mexico's NGC patients, 9.4 percent of New Mexico border area admissions, and between 3.7 and 15.2 percent of admissions in three Arizona border counties. Methamphetamine admissions increased in New Mexico border counties (from 3.6 percent in 2001), and a substantial increase occurred in Cochise County, Arizona.
- In eastern border areas, primary methamphetamine admissions continued to be low: 0.3 percent in Mexico and between 0.4 and 2.4 percent in three Texas border areas.

Heroin

- In western border regions, 36 percent of Mexico's NGC patients were admitted for primary heroin abuse. On the U.S. side, 20 percent of treatment admissions in San Diego and 12 percent of those in Yuma County, Arizona, reported heroin as the primary drug.
- In central border areas, one-half of Mexico's NGC patients reported heroin as their main drug. On the U.S. side, nearly 3.0 percent of New Mexico border area admissions and between 1.7 and 6.4 percent of admissions in three Arizona border counties reported heroin as the primary drug.
- In eastern border areas, heroin was the primary drug among 9 percent of Mexico's NGC patients. In Texas border areas, primary heroin admissions ranged from 9 percent in the Lower Rio Grand Valley programs to 25 percent in both Laredo and El Paso.
- In 2003, 94 percent of primary heroin treatment admissions on the Mexico border and 86 percent on the U.S. border reportedly injected the drug.

Cocaine

- In western regions, cocaine was reported as the primary drug by 6 percent of the NGC patients, 7 percent of San Diego treatment admissions, and 4 percent of admissions in Pima County, Arizona.
- In central regions, 20 percent of Mexico's NGC patients were admitted for primary cocaine abuse. On the U.S. side, 5 percent of New Mexico border admissions were for primary cocaine/crack abuse, as were between 9 and 17 percent of admissions in three Arizona border counties.
- In eastern areas, 40 percent of Mexico's NGC patients reported cocaine as the primary drug of abuse. In three Texas border areas, cocaine/crack accounted for between 17 and 19 percent of primary treatment admissions.

Polysubstance Abuse

- Polysubstance abuse characterized the majority of admissions on both sides of the border.
- Marijuana and alcohol were common secondary and tertiary substances used by primary methamphetamine, heroin, and cocaine admissions.
- Among cocaine users in Mexico, speedballing (combining cocaine with heroin or with methamphetamine) continued to be a common practice.
- Many stimulant users in Mexico have problems with depression and self-medicate with antidepressants.
- In San Diego County, treatment data show that 29 percent of the primary marijuana admissions in 2004 also used methamphetamine.
- “Mexican speedball” use (combining heroin and methamphetamine) presents a problem for treatment providers, because it is difficult to determine whether methadone clinics can handle the psychotic effects of methamphetamine use.

HIV/AIDS

HIV/AIDS risks in border areas are associated with...

- High percentages of injection use, especially among heroin addicts. Injection drug use was identified as the mode of transmission for 15 percent of the AIDS cases reported in Texas in 2004. In Mexico’s Epidemiologic Surveillance System of Addictions (SISVEA) data for the first half of 2005, more than 4,000 injection drug users (IDUs) with HIV/AIDS were identified
- Increased availability of ice, a higher purity form of methamphetamine which is associated with increases in high-risk sexual behaviors
- Increased rates of Mexico border crossings and migration into the United States
- Risky sexual activity associated with particular drugs

STUDIES REPORTED AT THE MEETING

Among the research studies presented and discussed were...

- A study of 567 migrants from Nogales, Tijuana, and Ciudad Juarez, which showed that 28 percent had used an illicit drug in their lifetime.
- A qualitative study ($n=300$) of cocaine users in Juarez, Mexico, who were in treatment and not in treatment (in the community), which showed that 30 percent had injected cocaine; 61 percent had used it in party settings; a majority had mental health problems associated with cocaine; and most were dependent on the drug.
- A national survey of students in grades 7-12, which showed that students in the State of Tamaulipas and in Mexico City who used drugs were more likely than those who did not use drugs to report risky sexual behaviors; methamphetamine users were more likely than users of other drugs to engage in sexual relations.
- Studies conducted by researchers at the University of California, San Diego (with Mexican researchers), which showed the relationship between drug production and trafficking and drug abuse patterns and trends on the border. For example, it was estimated that 70 percent of South American cocaine destined for the United States passes through the Central American-Mexico corridor. Increased cultivation of opium poppy in Mexico has resulted in lower prices for black tar in border areas. Other data showed that trends in the production, trafficking, and use of heroin and cocaine in border areas are linked with high-risk behaviors that place abusers at risk for HIV/AIDS and other blood-borne infections.
- An epidemiologic study of AIDS in Mexico, which showed that nearly 38 percent of NGC treatment admissions in border areas injected drugs, compared with nearly 21 percent of admissions throughout Mexico. More than 14 percent of Mexico’s AIDS cases between 1996 and the first half of 2005 were in northern border areas. The rate of HIV/AIDS in the State of Baja California in June 2004 was 106.5 per 100,000 population, a rate much higher than the average for Mexico. Associated with the high rate in Baja is the high number of tourists, sex workers, and drug users who mingle together in Tijuana.

REASONS FOR MONITORING DRUG ABUSE IN U.S.-MEXICO BORDER AREAS

Participants stressed the importance of maintaining a drug abuse surveillance network focused on drug abuse patterns and trends on both sides of the border. It has been established that drug abuse patterns and trends on one side of the border have an impact on the other side. It is important not only to assess patterns, trends, and emerging drug problems by geographic area but also to address the following:

- Where and how different drugs are produced
- Trafficking routes for different drugs
- How different drugs are distributed to and within communities
- How particular drugs are diverted from community to community
- Populations at high risk for abusing particular drugs
- How and where different drugs are obtained by users
- How different drugs are used (e.g., routes of administration, drug combinations)
- Behaviors associated with different drugs
- Health and social consequences associated with particular drugs

METHODOLOGICAL ISSUES IN DATA COLLECTION, ANALYSIS, AND REPORTING

Among the methodological problems and issues discussed were the following:

- Care needs to be taken on how indicator data are used. For example, clandestine methamphetamine laboratories are being closed, but the methamphetamine problem continues to spread.
- It is important to use multiple sources of information to describe drug abuse patterns and trends, and care must be taken not to infer to a wider population from a source of data that may not be representative.

- Potential sources of bias must be considered when analyzing treatment and hospital data. The treated populations provide one measure of populations seeking or needing treatment. Some biases in clinical data sources, as discussed by participants, included...
 - Women are not admitted into treatment as often as men.
 - Funding levels for treatment change over time and affect admissions rates.
- Drug use problems are categorized differently. In the United States, for example, different data sources categorize methamphetamine differently. Some do not distinguish methamphetamine from other amphetamines. In the Uniform Crime Reports, maintained by the Federal Bureau of Investigation, methamphetamine and other amphetamines are collapsed under the “synthetic narcotics” category.

Concern was expressed by U.S. representatives that available data cannot always be used to educate officials on the scope of different substance abuse problems. For example, in Arizona, some State personnel do not see methamphetamine as a problem because survey data show that only about 2 percent of the State’s school students have used methamphetamine.

One suggestion was to use social services data, particularly child welfare information, to help illustrate the extent of substance abuse problems to policymakers.

A Mexico representative stated that SISVEA has been addressing methodological issues. It has recently evaluated the way SISVEA data are gathered and analyzed. Efforts have focused on increasing data reliability, modifying indicators, enhancing data coverage, improving the completeness of questionnaire data, and assuring timelier reporting of information. The many changes have been made to ensure the information gathered is more precise than in the past.

DIRECTIONS FOR FUTURE RESEARCH

As in past BEWG meetings, participants identified issues that need additional research. Questions and issues that need to be addressed in future research included the following:

- Why are females nearly as likely as males to be methamphetamine abusers, while males are much more likely than females to abuse other substances?
- Why are cocaine and methamphetamine indicators increasing in eastern and central border areas?
- What drug abuse indicators best identify emerging drug problems?
- What effect will the displacement of hurricane victims in the United States have on abuse, distribution, and marketing of different drugs in border areas?

Epidemiology
of
Drug
Abuse:

Mexican
Reports

Drug Use Among Patients in Nongovernment Treatment Centers in the Northern Border of Mexico

Patricia Cravioto, Ph.D., Pablo Kuri, M.D., Mario Cortes, M.Sc., Fernando Galvan, M.Sc., and Robert Tapia-Conyer, Ph.D.

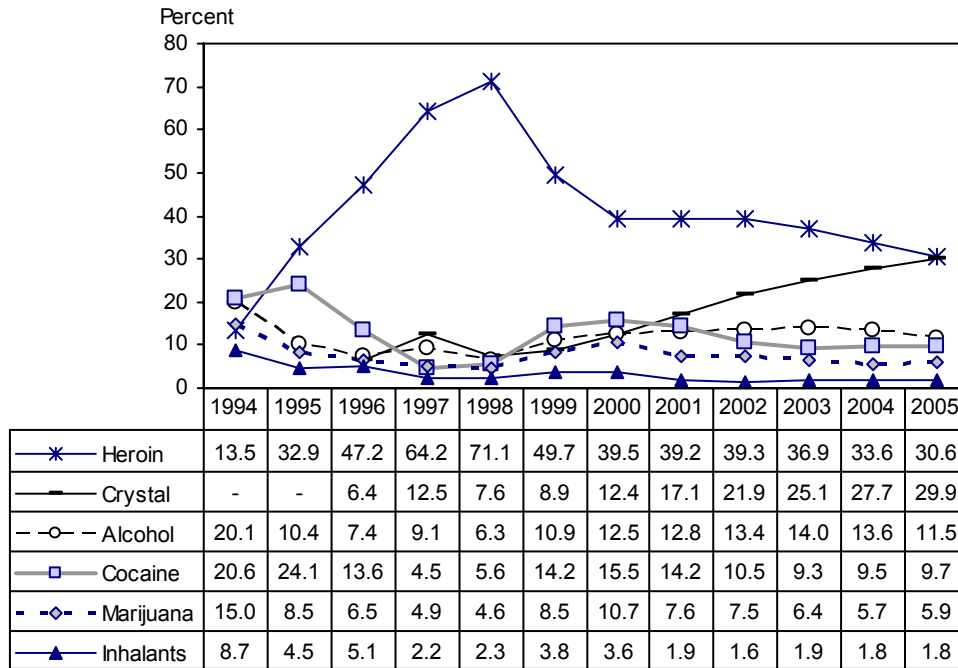
Data collected by the Epidemiologic Surveillance System of Addictions (SISVEA) on patients treated in nongovernment treatment centers (NGCs) along the northern Mexico border show the following:

- Across the border regions, heroin continued to be the predominant “drug of impact” (main drug of use) among NGC patients, peaking at 71.1 percent in 1998 and declining to 30.6 percent in the first half of 2005. Other trends of note for drugs of impact are...
 - Crystal methamphetamine rose from 6.4 percent of NGC patients in 1996 to a peak of 29.9 percent in the first half of 2005...
 - Cocaine declined from 20.6 percent of the patients in 1994 to 9.7 percent in the first half of 2005.
- Marijuana, followed by alcohol, continued to be the most frequently reported drugs of first use among NGC patients in northern border areas, representing 32.7 and 22.4 percent, respectively, of patients in the first half of 2005.
- Patterns of drug use varied across the three northern border regions. In the first half of 2005...
 - Heroin (35.9 percent) and crystal (35.8 percent) dominated as drugs of impact among NGC patients in the West Region...
 - Heroin (50.1 percent) and cocaine (20.3 percent) dominated in the Central Region...
 - Cocaine (40.3 percent) and marijuana (29.2 percent) were the most frequently reported drugs of impact in the East Region.
- Across all three regions in first half of 2005, a majority of the patients (90 percent or more) were male, 70 percent or more were polydrug users, and more than 80 percent began using drugs before the age of 20.

TRENDS IN DRUG USE AMONG NGC NORTHERN BORDER PATIENTS

As shown in exhibit 1, heroin was the most frequently reported drug of impact among NGC patient in northern border programs from 1995 through the first half of 2005, peaking in 1998 at 71.1 percent of the patients and declining to 30.6 percent of patients in the first half of 2005. Most striking is the increase in crystal as a drug of impact from 1996 (when programs began to record the drug) to the first half of 2005 (from 6.4 to 29.9 percent of patients) and the decrease in cocaine as a drug of impact (from 20.6 percent in 1994 to 9.7 percent in the first half of 2005) (see exhibit 1).

Exhibit 1. Drug of Impact Among NGC Patients in Northern Border Programs, by Drug and Percent: 1994–First Half of 2005



SOURCE: SISVEA—Nongovernment treatment centers

Across the years, marijuana was the most frequently reported drug of first use, followed by alcohol. In 1994, 39.1 percent of the NGC patients reported marijuana as their drug of onset; the proportions rose steadily to 50.1 percent in 1998 and declined steadily thereafter to 32.7 percent in the first half of 2005. Similarly, the proportions of NGC patients reporting alcohol as their drug of onset declined from 31.0 percent in 1994 to 22.4 percent in 2005. Inhalants as a drug of onset also declined from 14.8 percent of NGC patients in 1994 to 5.4 percent in the first half of 2005. When 1994 and 2005 data are compared, slight increases appear for heroin (2.7 to 3.2 percent, respectively) and cocaine (3.0 to 4.2, respectively) as drugs of first use. The most notable increase as a drug of onset appears

for crystal, which represented 0.8 percent of 1996 patients compared with 6.0 percent of patients in the first half of 2005.

Drug Use Among NGC Patients by Northern Border Region

In the first half of 2005, there were 11,482 patients treated in NGCs across the northern border: 66.4 percent were in the West Region, 26.3 percent in the Central Region, and 7.2 percent in the East Region. Exhibit 2 provides a profile of these patients, showing the most common demographic and drug behavior characteristics. Across regions, there were no statistically significant differences in these patient characteristics.

Exhibit 2. Profile of NGC Patients, by Northern Border Region and Percent: First Half of 2005¹

Characteristic	Western Border Region	Central Border Region	Eastern Border Region
Male	90	92	94
Age 20–24	17	18	22
Age 30 and older	52	49	38
Unmarried	55	50	52
Polydrug User	85	85	70
First Used Drugs Before Age 20	87	90	84

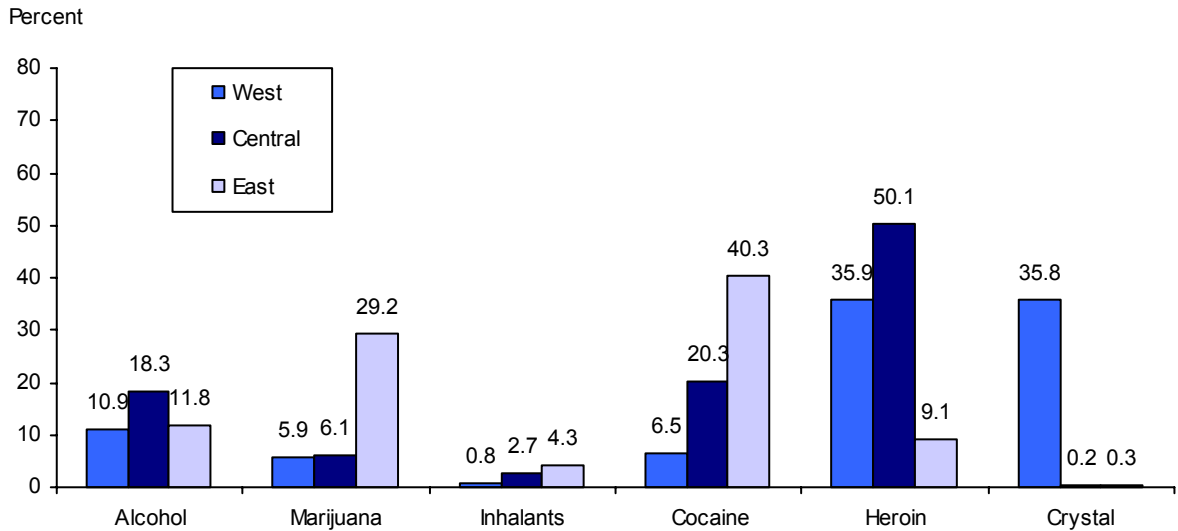
¹Percentages rounded.

SOURCE: SISVEA—Nongovernment treatment centers

In the first half of 2005, patterns of drug of impact varied by region among patient groups. In the West Region, heroin (35.9 percent) and crystal (35.8 percent) were predominant. In the Central Region, the dominant drugs of impact were heroin (50.1 percent)

and cocaine (20.3 percent). Cocaine (40.3 percent) and marijuana (29.2 percent) were the major drugs of impact among patients in the East Region. The percentages for different drugs by region are shown in exhibit 3.

Exhibit 3. Drug of Impact Among NGC Patients, by Border Region and Percent: First Half of 2005



SOURCE: SISVEA—Nongovernment treatment centers

In each of the three regions in the first half of 2005, marijuana was the most frequently reported drug of first use, ranging from 31.5 percent in the West to 37.7 percent in the Central Region. Alcohol as a drug of onset ranged from 20.1 percent of patients in the West to 28.4 percent in the Central Region. Other drugs typically accounted for less than 10 percent of the drugs of first use among patient groups in any region. The exceptions were crystal in the West, at 10.5 percent of patients; inhalants, at 11.4 percent in the Central Region; and cocaine, at 11.4 percent in the East Region.

CONCLUSIONS

Among patients treated at NGCs since 1995, heroin has been the major drug of impact, with crystal ranking second since 2001. Marijuana and alcohol continue to be the most frequently reported drugs of first use. Treatment demand varies across the three northern border regions. In the first half of 2005, demand for treatment of crystal and heroin abuse was high in the West Region. In the Central Region, treatment demand was highest for heroin abuse. In the East Region, demand for treatment of cocaine abuse dominated.

Cocaine Users and the Utilization of Services in Ciudad Juarez, Chihuahua

Patricia Cravioto, Ph.D., Fernando Galvan, M.Sc., Blanca Jimenez, and Roberto Tapia-Conyer, Ph.D.

A study designed to learn more about the reasons people use cocaine, the context in which the drug is used, psychological factors associated with use, and utilization of health services in Juarez involved four groups of persons age 14 and older: (1) treatment patients whose primary drug of abuse was cocaine, (2) patients whose main drug was not cocaine, (3) patients who had not used cocaine in 5 years, and (4) active cocaine users not seeking treatment. Some major findings were...

- *The majority in all groups were most likely to report inhaling cocaine, with Groups 1 and 3 being the most likely to inject the drug.*
- *A majority in all groups first used cocaine with friends.*
- *Groups 1 and 2 were the most likely to use cocaine at home in a party setting, while Groups 3 and 4 were the most likely to use “on the street/in shooting galleries.”*
- *A majority in all groups reported mental health problems associated with cocaine use, as well as dependence on the drug.*
- *Barriers to services included location (too distant) and cost.*

STUDY METHODS AND SAMPLE

Juarez was chosen for this study because of relatively high levels of cocaine abuse in the city. Study respondents, all current or past cocaine users, were

selected on the basis of risk criteria. Respondents were from four high-risk zones in Juarez and were administered a pilot-tested questionnaire. Of the 320 selected persons, 300 provided valid interviews (19 were found ineligible and 1 declined participation). Three groups were patients in 17 treatment centers and a fourth was from the community. The four groups were as follows:

- **Group 1:** 60 patients whose primary drug was cocaine
- **Group 2:** 76 patients whose main drug was not cocaine
- **Group 3:** 39 patients who had not used cocaine for 5 years
- **Group 4:** 49 active cocaine users from the community who were not seeking treatment; these respondents were selected through “snow-ball” sampling

Across the four groups, 84 percent were male, with the largest proportion of females (27 percent) being in Group 1. The median age of the four groups ranged from 26 to 28. The median years of education ranged from 6 to 7. Some 57 percent of Groups 1 and 4 were employed, compared with 49 percent of Groups 2 and 3. From two-thirds to three-quarters of the respondent groups were unmarried or separated.

SELECTED STUDY FINDINGS

First Drugs of Use. Tobacco, alcohol, and marijuana were the first substances used by a majority of respondents, ranging between 82 percent of those in Group 3 to 91 percent of those in Group 4. Only a few respondents in Group 2 (1.3 percent) reported cocaine as the first drug of use.

First Use of Cocaine. Respondents in all groups initiated cocaine use before age 20. The majority first used the drug by inhaling, with substantial minorities injecting the drug (*see exhibit 1*). Cocaine was most likely to be used with friends.

Exhibit 1. First Cocaine-Use Behaviors, by Study Group and Percent

Behavior	Group 1	Group 2	Group 3	Group 4
Median Age—First Cocaine Use	19.0	19.6	18.0	18.0
Mode of Administration—Cocaine				
Inhaled	66.7	72.4	53.8	67.3
Injected	30.0	21.1	46.2	28.6
Smoked	3.3	6.6	0.0	4.1
Used Cocaine with...				
Friends	62.7	71.1	69.2	73.5
Parents	15.3	10.5	12.8	10.2
Peers	8.5	11.8	5.1	4.1
No one (alone)	13.6	6.6	12.8	12.2
Place Cocaine Used...				
Home (mostly party setting)	61.1	56.6	46.6	38.7
Bar, club, party	17.0	7.8	2.6	14.3
Work	0.0	9.2	10.3	6.1
On the street/shooting gallery	16.9	22.4 ¹	35.9 ¹	30.6 ¹
Motivation for First Use				
Curiosity	81.7	74.3	71.8	89.9
Other ²	18.3	25.7	28.2	10.1
How Cocaine Was Obtained				
Cheap/invited (free)	76.0	77.6	61.6	65.3
Purchased	24.0	23.4	38.4	34.7

¹Small percentages of Groups 2, 3, and 4 used in shooting galleries (3.9, 5.1, and 10.2, respectively).

²Included peer pressure, being warned, and personal problems.

SOURCE: SISVEA

Health and Mental Health Problems Associated with Cocaine Use. Respondents in all groups reported a number of physical health problems associated with cocaine use, but no one group appeared to report a higher frequency of these problems. The physical health problems included gastrointestinal (77–88 percent), neurological (69–79 percent), cardiovascular (52–63 percent), and respiratory (47–63 percent). Group 4 was the most likely to report accidents associated with cocaine use (73 percent), compared with 59 (Group 2) to 67 percent (Group 1) of the other groups. Overdose was reported by approximately 26 percent of Group 4 respondents, 32 percent of those in Groups 1 and 2, and 38 percent of Group 3 respondents.

Most striking was the large proportions of each group that reported mental health problems and dependence on cocaine. Between 94 percent (Group 4) and 98 percent (Group 1) reported experiencing mental health problems associated with cocaine use. The proportions dependent on cocaine ranged from ap-

proximately 88 to 90 percent in Groups 1 and 4 and between 91 and 95 percent in Groups 2 and 3, respectively.

Use of Services and Barriers to Use. The group from the community (Group 4) was the least likely to report using health services (84 percent); between 90 percent (Group 1) and 95 percent (Group 2) reportedly used health services. Sizable minorities in each group had required hospital services (18 [Group 4] to 31 percent [Group 3]). A majority in each group perceived conditions in treatment centers as “very good” or “functional” (ranging from a low of 60 percent of Group 2 respondents to between 76 and 80 percent of the other groups), and a majority would recommend the centers to others (80 to 97 percent).

Barriers to use included being too far away (44 percent, Group 4; 53 percent, Groups 1 and 2; and 69 percent, Group 3) and cost being too high (61 percent, Group 1; 72–73 percent Groups 2 and 4; and 81 percent Group 3).

Drug Use Among Migrants on the Mexico-U.S. Border

Jose Angel Prado, Ph.D.

A study of 567 Mexicans from Nogales, Tijuana, and Ciudad Juarez who migrated to different areas of the United States (U.S.) showed that...

- *28 percent had used an illicit drug in their lifetime, compared with slightly more than 5 percent of the general population in Mexico*
- *Of those migrants who reported lifetime use of an illicit drug, 37 percent began their drug use in the U.S.*
- *While in the U.S., migrants were more likely to begin using cocaine and methamphetamine but less likely to begin using marijuana*
- *Migrants who cross from Tijuana into the U.S. reported greater drug use than those from Juarez and Nogales; use by Tijuana migrants may be more problematic, since many reported using drugs in U.S. workplaces*

THE SAMPLE

This investigation involved 567 cases who crossed into the U.S. from the following cities:

- Nogales—222; these were from poor, largely agricultural Mexican States
- Tijuana—141; these were from large metropolitan areas
- Juarez—204; these were from the same central area of Mexico

Of these migrants, 78 percent were male. The average age of the migrants was 29. Fifty-four percent had a high or “average” education, and 78 percent had been in the labor force before immigrating to the U.S.

MIGRANT DESTINATIONS

The main destinations of these migrants are summarized below:

- **Nogales cases.** These 222 individuals were most likely to have crossed into California (29 percent) and Arizona (16 percent), with 5–6 percent crossing into North Carolina, Georgia, Washington, and New York, and 27 percent migrating to various other areas in the U.S. (5 percent were unsure of the U.S. State to which they migrated).
- **Tijuana cases.** The majority of these 141 individuals migrated to California (71 percent), with 2–4 percent crossing into Arizona, Illinois, Nevada, Washington, and Colorado, and 6 percent to various other U.S. States (8 percent were unsure of the State to which they migrated).
- **Juarez cases.** One-quarter of these 204 individuals migrated to Texas and 10 percent to California; 7–8 percent migrated to Nevada, Colorado, and Kansas, while 27 percent went to various other U.S. States (8 percent were unsure of the State to which they migrated).

DRUG USE

The 2002 national drug survey estimated that 5 percent of the Mexican population had used an illicit drug at some time during their lifetime. Among the 567 migrants in this study, 28 percent had used an illicit drug during their lifetime and 37 percent of these lifetime users began using drugs in the U.S. While in the U.S., more migrant drug users began using cocaine and methamphetamine and fewer initiated marijuana use.

Marijuana, cocaine, and methamphetamine were reportedly the drugs of choice and the drugs of impact in this migrant population. Lifetime use of illicit drugs was most frequently reported among the Tijuana-crossing group, as shown in exhibit 1. The Tijuana group reported frequently using drugs in the workplace in the U.S.

Exhibit 1. Lifetime Use of Illicit Drugs, by Study Group and Percent: February–December 2004

Drug	Nogales n=222	Tijuana n=141	Ciudad Juarez n=204
Marijuana	7.2	37.6	8.3
Powder Cocaine	2.7	18.4	5.4
Methamphetamine	0.9	9.9	0.5
Solvents/Inhalants	0.5	9.2	–
Rohypnol	0.5	5.7	1
Crack Cocaine	0.9	4.3	–
Mushrooms	0.9	2.8	0.5
Other Substances	0.9	2.8	0.5
Heroin	0.5	2.1	–
Ecstasy	0.9	1.4	–
Lysergic Acid Diethylamide (LSD)	0.9	1.4	–
Antidepressants	0.5	1.4	0.5
Stimulants/Amphetamines	–	–	2.8

SOURCE: SISVEA—National Council Against Addiction

Drug Use and Risky Sexual Behaviors Among Mexican School Students

Jorge A. Villatoro-Velazquez, M.C., Ma.
Elena Medina-Mora, Maria de Lourdes
Gutierrez-Lopez, Clara Fleiz-Bautista, and
Nancy Amador-Buenabad

Data from the 2003 probability sample of Mexican students in grades 7–12 were examined to understand the relationship between risky sexual behaviors and drug use, with a special focus on understanding the relationship between methamphetamine use and risky sexual behaviors. Comparisons between study groups in the border State of Tamaulipas (2000) and Mexico City show...

- *In Tamaulipas, 10.9 percent of male students and 6.7 percent of female students reported ever using (lifetime) any drug, as did 16.9 percent of males and 13.5 percent of females in Mexico City. Methamphetamine use (lifetime) was reported by 2.8 percent of male and 2.1 percent of female students in Tamaulipas, and 3.6 and 2.8 percent of males and females, respectively, in Mexico City.*
- *Comparisons of “users” and “nonusers” show that the users were more likely to report having had sexual relations and to have had sex when drinking alcohol. The proportions of users reporting having had sexual relations and having had sex when drinking alcohol were higher in Mexico City than in Tamaulipas, and they tended to be higher among males than females in both user and nonuser groups.*
- *Students who reported methamphetamine use were more likely than those reporting use of other drugs or than nonusers to have had sexual relations and to have had sex while drinking alcohol. The proportions reporting these risk behaviors were higher among Mexico City students than those in Tamaulipas, and, among all study groups, tended to be higher among males than females.*
- *Use of some type of contraception was fairly high among both users and nonusers, typically*

nearly two-thirds in Tamaulipas and more than three-quarters in Mexico City; the exceptions were some female nonuser groups (around 50 percent) and users of other drugs in Tamaulipas (56 percent).

MEXICO’S NATIONAL SCHOOL SURVEY

Using a validated instrument, the National Institute of Psychiatry conducted a survey of school students in 2003. One objective was to gather information on drug use and risky sexual behaviors that could be used in treatment of adolescents. The probability sample represented 60 percent of Mexican students in grades 7–9 and 40 percent of those in grades 10–12. The focus in this paper is on students in the State of Tamaulipas and in Mexico City.

STUDY FINDINGS

Drug Use Among Students in Tamaulipas and Mexico City

The survey found that 10.9 percent of male students in Tamaulipas and 16.9 percent of those in Mexico City had used drugs in their lifetime. Lifetime use of drugs was reported by 6.7 percent of the female students in Tamaulipas and 13.5 percent of those in Mexico City. Lifetime methamphetamine use was reported by 2.8 percent of male students in Tamaulipas and 3.6 percent of those in Mexico City. Among female students, 2.1 percent of those in Tamaulipas and 2.8 percent of those in Mexico City reported ever using methamphetamine.

Sexual Behaviors Among Users and Nonusers

Comparisons of students who were drug users and nonusers in Tamaulipas show that users (35.1 percent) were more likely than nonusers (10.8 percent) to report having had sexual relations (*see exhibit 1*). The same pattern held in Mexico City: 51.8 percent of users and 16.1 percent of nonusers had had sexual relations. In the user and nonuser groups, males were more likely than females to report having had sexual relations. Users were also more likely to report drinking alcohol and having sex, with the proportions being higher in Mexico City than in Tamaulipas. Use of some type of contraception was fairly high in both the user and nonuser groups, ranging between 62 and 67 percent in all but female nonuser students in Tamaulipas and ranging between approximately 74 and 81 percent of the student groups in Mexico City. Other risk behaviors varied across the study groups.

Exhibit 1. Prevalence of Sexual Behaviors Among Drug User and Nonuser Student Groups in Tamaulipas and Mexico City, by Behavior, Gender, and Percent: 2000 and 2003

Behavior	Tamaulipas (2000)		Mexico City (2003)	
	Users	Nonusers	Users	Nonusers
Had Sexual Relations	35.1	10.8	51.8	16.1
<i>Male</i>	46.7	17.1	63.2	20.8
<i>Female</i>	14.4	4.5	37.1	11.5
Had Sexual Relations 7 or More Times in the Month Prior to Survey	14.0	17.8	19.2	13.8
<i>Male</i>	16.2	19.8	19.3	12.0
<i>Female</i>	--	11.1	18.9	16.1
Used Contraceptive Method	65.3	62.2	78.9	78.1
<i>Male</i>	66.2	65.4	79.0	80.7
<i>Female</i>	66.7	49.3	78.7	73.4
Drank Alcohol/Had Sex	25.3	11.3	37.9	16.5
<i>Male</i>	31.2	11.9	41.4	19.1
<i>Female</i>	--	9.1	30.3	11.7
Sex Resulted in Pregnancy	1.1	3.4	13.0	9.0
<i>Male</i>	--	3.4	12.6	6.8
<i>Female</i>	6.7	3.4	13.9	13.0

SOURCE: National Institute of Psychiatry, Gaither et al. 2004

Sexual Behaviors Among Users of Methamphetamine and Other Drugs and Nonusers

In Tamaulipas, students who reported ever using methamphetamine (43.8 percent) were more likely than those who had used other drugs (29.6 percent) or those who were nonusers (10.7 percent) to have had sexual relations (*see exhibit 2*). This pattern was more striking in Mexico City, where 68.1 percent of methamphetamine users reported having had sexual relations, compared with 47.3 percent of those who used other drugs and 16.0 percent of nonusers. Males in all groups were more likely than females to have had sexual relations.

As shown in exhibit 2 on the following page, slightly more than one-fourth of users in Tamaulipas and

nearly 38 percent of their counterparts in Mexico City reported drinking alcohol and having sex, a practice more common among users than nonusers, among methamphetamine users versus other groups, and among males compared with females in all study groups.

Use of some contraceptive method tended to be fairly high in all three study groups, ranging between 59 and 71 percent in all but two female groups in Tamaulipas, and between approximately 74 and 81 percent of the different study groups in Mexico City. The proportions of students in each group who reported having sexual relations seven or more times in the prior month varied, as did the proportions reporting that sex had resulted in pregnancy, as shown in exhibit 2.

Exhibit 2. Prevalence of Sexual Behaviors Among Students Who Had Used Methamphetamine (MA) or Other Drugs (OD) and Nonusers in Tamaulipas and Mexico City, by Behavior, Gender, and Percent: 2000 and 2003

Behavior	Tamaulipas (2000)			Mexico City (2003)		
	MA User	OD User	Nonuser	MA User	OD User	Nonuser
Had Sexual Relations	43.8	29.6	10.7	68.1	47.3	16.0
<i>Male</i>	58.1	40.4	16.9	80.0	58.5	20.7
<i>Female</i>	23.3	9.8	4.5	52.4	33.0	11.4
Had Sexual Relations 7 or More Times in the Month Prior to Survey	15.4	12.5	18.1	20.9	18.3	13.7
<i>Male</i>	18.2	14.3	20.2	23.1	17.1	12.1
<i>Female</i>	--	--	11.1	15.9	21.2	15.8
Used Contraceptive Method	66.7	59.4	63.3	79.1	78.9	78.0
<i>Male</i>	65.4	61.4	66.7	80.8	78.8	80.5
<i>Female</i>	71.4	55.6	50.0	75.7	79.3	73.6
Drank Alcohol/Had Sex	36.4	20.3	10.9	50.4	32.6	16.5
<i>Male</i>	42.3	24.6	11.8	57.1	35.2	19.1
<i>Female</i>	14.3	--	7.7	36.8	27.0	11.8
Sex Resulted in Pregnancy	3.2	--	3.4	18.9	10.8	8.9
<i>Male</i>	--	12.8	3.5	20.5	9.7	6.7
<i>Female</i>	14.3	--	3.5	15.6	13.4	12.9

SOURCE: National Institute of Psychiatry, Gaither et al. 2004

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Epidemiologic View of AIDS and New Data on Injection Drug Use Along the Border

Mario Cortés, M.Sc., Patricia Cravioto, Ph.D., Pablo Kuri, M.D., and Fernando Galván, M.Sc.

According to data provided by the National AIDS Registry on cumulative acquired immunodeficiency syndrome (AIDS) cases between 1986 and June 2005, as well as information provided by SISVEA on the treatment of injection drug users (IDUs)...

- 13,835 (14.3 percent) of the 96,513 AIDS cases in Mexico have been in the northern border area.
- Nearly 5 percent of northern border AIDS cases are attributed to blood-borne causes, primarily injection drug use and blood transfusion.

- Injection drug use among treatment admissions along the northern border (37.6 percent) is proportionally higher than among treatment admissions in all of Mexico (20.8 percent).
- The overwhelming majority of IDUs along the northern border are polydrug users.

EPIDEMIOLOGIC VIEW OF HIV/AIDS ALONG THE NORTHERN BORDER OF MEXICO

Of the cumulative 96,513 AIDS cases diagnosed in Mexico between 1986 and June 2005, 13,835 (14.3 percent) were in northern border areas. More than one-half of these cases (58.0 percent) have resulted in death, while 29.1 percent of those diagnosed with AIDS are living and 12.9 percent are unaccounted for. Among the cases along this border, 31.5 percent are in the western State of Baja California (*see exhibit 1*). Although males represent 85.7 percent of the cumulative cases along the northern border, the proportion of new female cases has been increasing in recent years.

Exhibit 1. Distribution of AIDS Cases Along the Northern Border States of Mexico, by Percent: Preliminary Data from 1996 through June 30, 2005



N=13,835

SOURCE: National Registry of AIDS, General Directorate of Epidemiology/Ministry of Health of Mexico

The overwhelming majority of AIDS cases along the border (93.5 percent) are attributed to sexual contact. Only 4.7 percent of northern border AIDS cases ($n=376$) were caused by blood-borne factors. These cases were almost evenly split between injection drug use ($n=169$) and blood transfusion (163).

Of the 169 AIDS cases among IDUs in northern border areas, most are male (91.1 percent) and age 25–44 (75.1 percent). Most live in Sonora or Baja California (42.6 and 39.1 percent, respectively) (*see exhibit 2*). By border city, the highest proportions of cases related to injection drug use are in Tijuana (23.7 percent), Hermosillo (13.6 percent), and Mexicali (12.4 percent).

Exhibit 2. Distribution of Injection Drug Use-Related AIDS Cases by Border State and Percent: Preliminary Data from 1986 through June 30, 2005



N=169

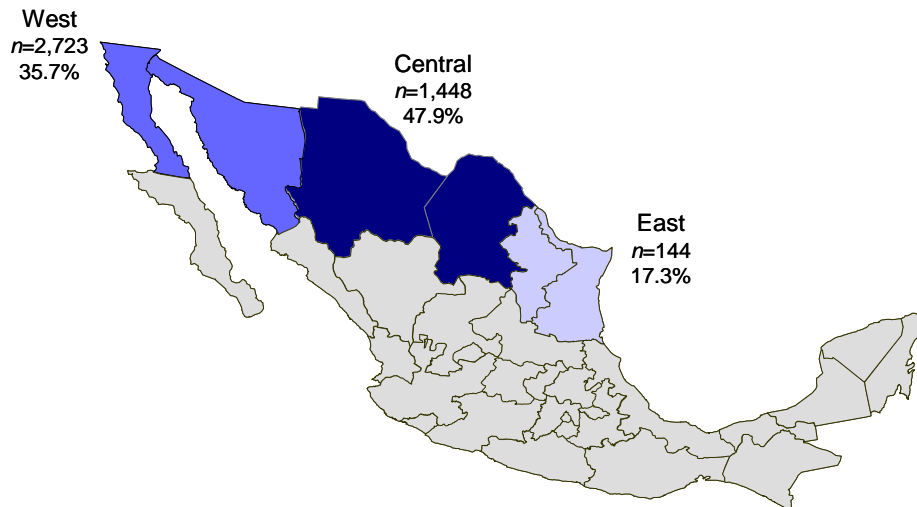
SOURCE: National Registry of AIDS, General Directorate of Epidemiology/Ministry of Health of Mexico

INJECTION DRUG USERS IN TREATMENT IN THE NORTHERN BORDER AREA

Although SISVEA does not measure the prevalence of the human immunodeficiency virus (HIV) and AIDS among IDUs, assessing injection drug use behaviors is another tool used in monitoring risky behaviors related to these diseases. According to SISVEA, as of June

2005, there were 4,315 IDUs along the northern border in Mexico; these represented 37.6 percent of all admissions to nongovernment treatment centers (NGCs) in the area. This is higher than the proportion of injection drug users overall in the country. As shown in exhibit 3, nearly one-half of these IDUs along the border lived in the central border region.

Exhibit 3. Percentages of Injection Drug Users in the Northern Border Area, by Region: First Half 2005



SOURCE: SISVEA—Nongovernment treatment centers

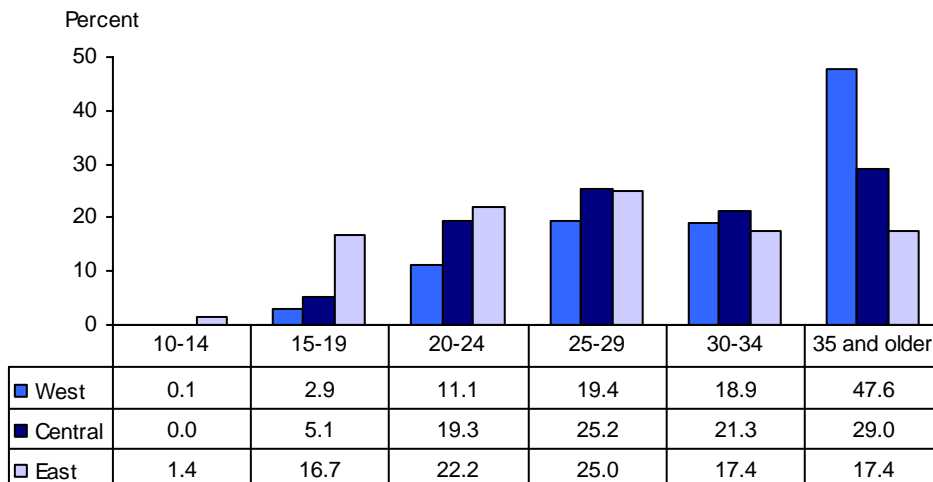
Most of these IDUs were males (between 93.0 and 96.5 percent in the three border regions), and poly-drug use was common (81.9 percent in the East, 92.4 percent in the West, and 94.8 percent in the Central

Region). Most of the IDUs were quite young when they began to inject drugs. Around one-half of the IDUs in each region began injecting drugs between the ages of 10 to 14 (51.4 percent in the East, 50.5

percent in the West, and 48.1 percent Central Region), and between 25.7 percent (East) and 37.0 percent (Central Region) first began injecting between

the ages of 15 and 19. At admission, IDUs in the West Region tended to be older, with nearly one-half being age 35 or older (*see exhibit 4*).

Exhibit 4. Current Age of IDUs, by Border Region: First Half 2005



N=4,315
 West, n=2,723
 Central, n=1,148
 East, n=144

SOURCE: SISVEA—Nongovernment treatment centers

CONCLUSIONS

Injection drug use in Mexico is highest in areas along the northern border, and is responsible for the majority of border AIDS cases attributable to blood-borne

contact. Because IDUs are considered at high risk for contracting HIV/AIDS, it is important to establish AIDS prevention programs along the border.

Epidemiology
of
Drug
Abuse:

U.S.
Reports

Drug Abuse on the Arizona-Mexico Border

Jenny Chong, Ph.D., and Darlene Lopez, M.S.

Patterns for major drugs of abuse vary across the four Arizona counties that border Mexico. However, data suggest that methamphetamine abuse is spreading eastward toward Cochise County and that marijuana and cocaine/crack abuse continue to challenge health and law enforcement agencies...

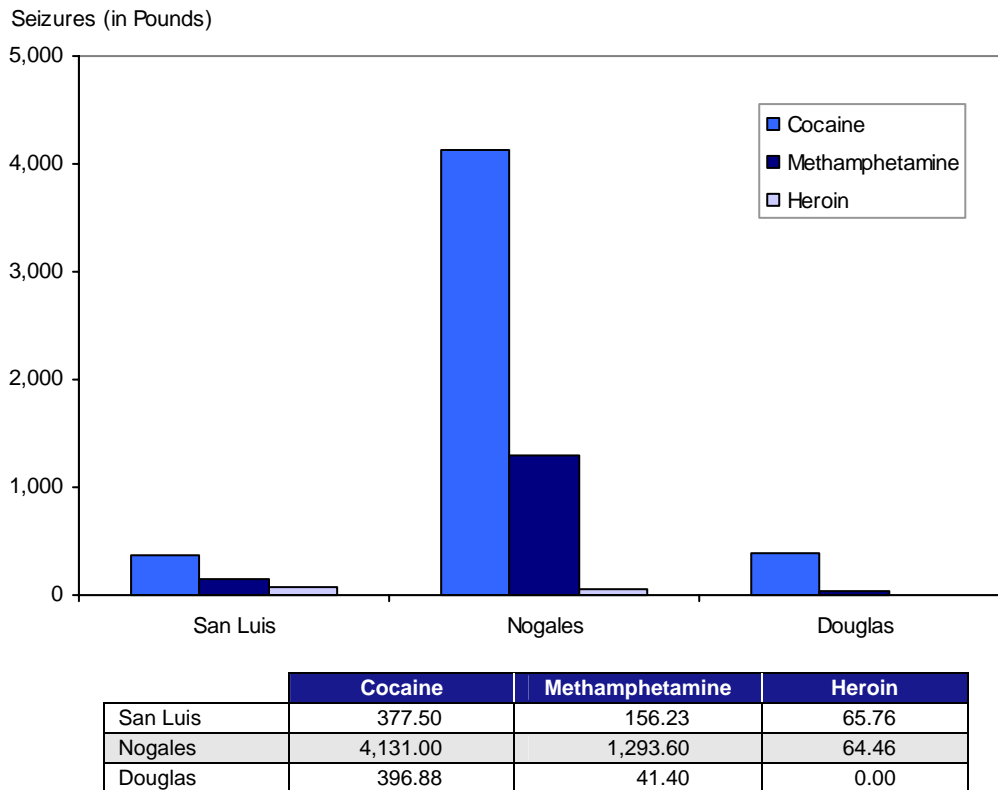
- *The Nogales Port of Entry seized 1,293 pounds of methamphetamine in 2004. Seizures of clandestine laboratories in border counties decreased.*
- *Amphetamine was the most frequently recorded illegal drug of abuse in the 2004 hospital discharge data in Yuma and Cochise Counties, while cocaine was more dominant among discharges in Pima and Santa Cruz Counties.*

- *Data from the Uniform Crime Reports in 2004 suggested that arrests involving methamphetamine, as indicated by synthetic narcotics arrest reports, exceeded those for heroin/cocaine in the rural border counties; however, in most counties, arrests involving marijuana were most dominant.*
- *Treatment admissions for primary marijuana abuse in FY 2004 exceeded admissions for other drugs in all border counties except Yuma, where methamphetamine accounted for the largest proportion of admissions.*

DRUG ABUSE PATTERNS AND TRENDS

Seizure data from the Drug Enforcement Administration show that most of the drugs seized in Arizona's Ports of Entry (POEs) in 2004 occurred at the Nogales POE. In 2004, Customs officials seized 4,131 pounds of cocaine, 1,294 pounds of methamphetamine, and 64.5 pounds of heroin at the Nogales POE (see exhibit 1). Drug seizures in all three Arizona POEs increased from 2003 to 2004.

Exhibit 1. Drug Seizures at Arizona Ports of Entry, in Pounds: 2004



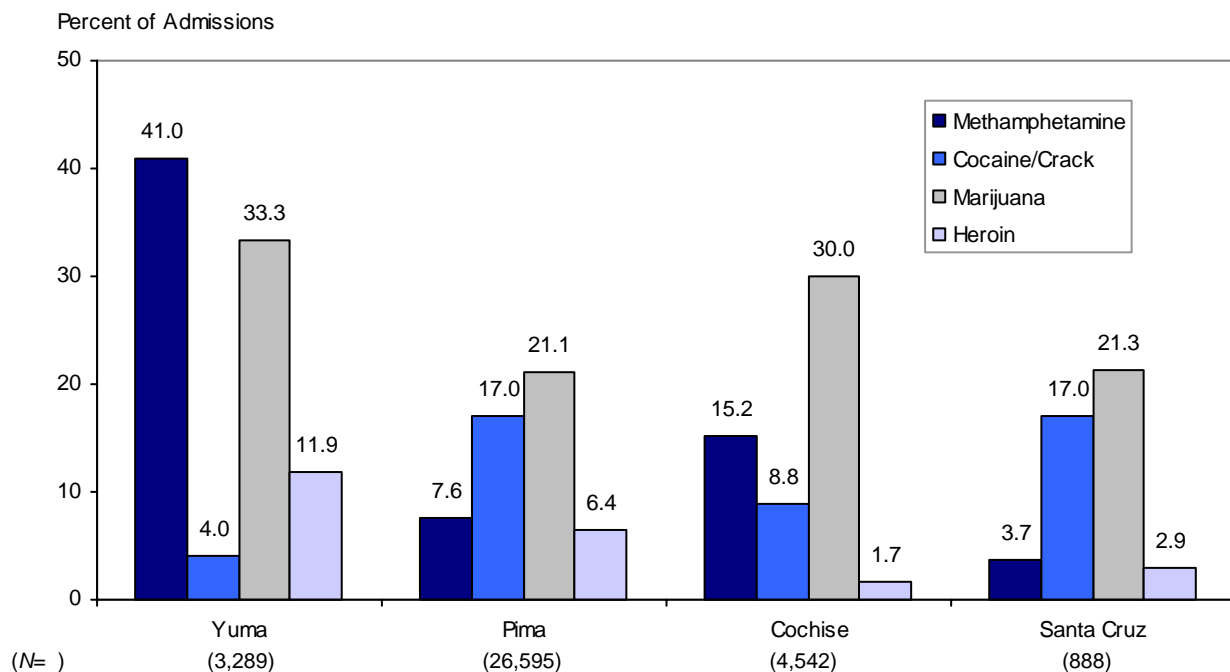
SOURCE: U.S. Customs Management Center at El Paso

Drug abuse treatment data, based on an assessment that identifies specific drugs of abuse among treatment admissions, show the following for fiscal year (FY) 2004:

- Marijuana abuse had the greatest impact on treatment admissions across all border counties except Yuma (*see exhibit 2*).
- Methamphetamine admissions were highest in Yuma County, which borders California on the

- west. Cochise County, which is located adjacent to New Mexico to the east and Mexico to the south, experienced a rise in methamphetamine admissions in the past several years.
- Cocaine/crack admissions in FY 2004 were proportionately highest in Pima County, which is home to Tucson and is located between Yuma and Santa Cruz Counties with Mexico to the south.

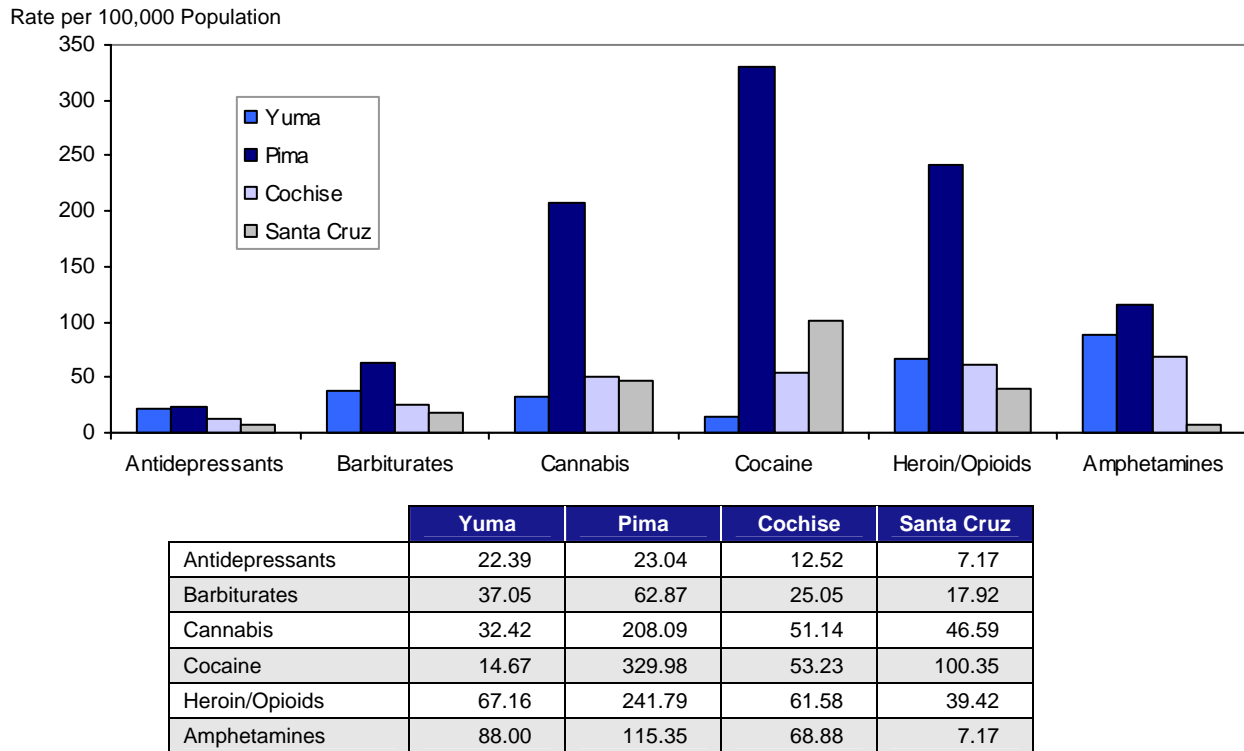
Exhibit 2. Drug Treatment Admissions in Arizona Border Counties, by Percent: FY 2004



SOURCE: Arizona Department of Health Services

Adult hospital discharge data involving methamphetamine are subsumed under the category of amphetamine-related discharges; however, given the increases in methamphetamine treatment admissions and information collected from other sources, it is

likely that these amphetamine cases include a substantial number of discharges involving methamphetamine. The hospital discharge rates per 100,000 population in 2004 are shown in exhibit 3.

Exhibit 3. Rates of Adult Drug-Related Hospital Discharges per 100,000 Population in Arizona Border Counties: 2004

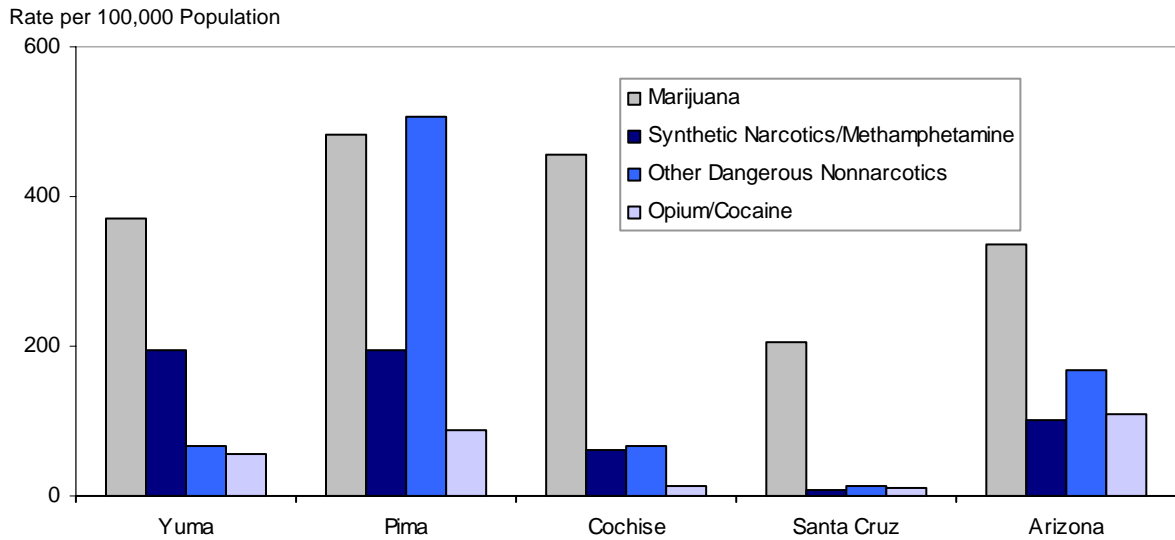
SOURCE: Arizona Department of Health Services

Comparisons of 1997 and 2004 data show substantial increases in amphetamine-related hospital discharge rates in all four border counties:

- In Yuma County, the rate of amphetamine-related hospital discharges increased from 32.18 in 1997 to 88.00 in 2004, a 173-percent increase.
- The rate in Pima County increased from 20.24 in 1997 to 115.35 in 2004, a 470-percent increase.
- The rate in Cochise County rose from 13.17 in 1997 to 68.88 in 2004, a 423-percent increase.
- In Santa Cruz County, the rate of amphetamine-related hospital discharges increased 84 percent, from 3.89 in 1997 to 7.17 in 2004.

Uniform Crime Report (UCR) arrest data are limited because the Federal Bureau of Investigation categorizes drugs differently than other agencies. For example, heroin and cocaine are included together and methamphetamine is subsumed under the “synthetic narcotic” category. Therefore, it is not possible to determine the relative extent to which, for example, heroin arrests differ from cocaine arrests. The rates of arrests documented by UCR for border counties and the State overall in 2004 are depicted in exhibit 4. As can be seen, marijuana arrests tended to predominate.

Exhibit 4. Rates of Adult Drug-Related Arrests per 100,000 Population in Arizona Border Counties and Statewide: 2004



	Yuma	Pima	Cochise	Santa Cruz	Arizona
Marijuana	370.51	481.60	456.08	204.29	335.12
Synthetic Narcotics/Methamphetamine	193.75	194.29	62.62	7.17	102.55
Other Dangerous Nonnarcotics	65.61	507.91	67.84	14.34	166.91
Opium/Cocaine	54.80	89.18	14.61	10.75	108.94

SOURCE: Uniform Crime Reports

Trend data for synthetic narcotics, which includes methamphetamine, show that this category of arrests increased substantially in Yuma, Pima, and Cochise Counties from 1997 to 2004...

- In Yuma County, the rate of arrests involving synthetic narcotics increased from 7.87 in 1997 to 193.75 in 2004.
- In Pima County, the rate increased from 114.67 in 1997 to 194.29 in 2004.
- In Cochise County, the rate of arrests for synthetic narcotics increased from 4.78 in 1997 to 62.61 in 2004.

Drug Use on the New Mexico Border

Nina G. Shah, M.S.

Drug abuse indicator data on the New Mexico-Mexico border show that...

- **Primary admissions for methamphetamine abuse increased in border areas, from 3.6 percent of all admissions in 2001 to 9.4 percent in 2004. In 2004, the proportions of primary admissions for methamphetamine and marijuana in border programs were proportionately higher than in nonborder areas.**
- **Overdose deaths (1995–2004) involving prescription-type drugs in border areas exceeded those in nonborder areas; for deaths involving opioids other than methadone and for antidepressants, the differences were statistically significant. Overdose deaths involving cocaine and methamphetamine differed little in the two areas.**
- **A slightly smaller proportion of border than nonborder students in grades 9–12 in 2003 reported past-30-day use of cocaine and past-12-month use of methamphetamine. There was virtually no difference between groups in past-30-day use of inhalants; however, significantly fewer border than nonborder students reported past-30-day use of marijuana.**
- **The number of small clandestine methamphetamine labs operating in rural southern**

New Mexico appears to be declining, while high quality methamphetamine from Mexico is becoming more available.

Overview of the New Mexico Border Area

The New Mexico border area spans approximately 180 miles and includes all or parts of five counties. From west to east, these are Hidalgo, Grant, Luna, Doña Ana, and Otero Counties. The border area is sparsely populated (16 percent of the State's more than 1.8 million residents). There are numerous trails, roads, and footpaths that provide drug smugglers easy entry into the United States. Drug trafficking in these and other areas of the State is largely controlled by Mexican Drug Trafficking Organizations (DTOs), according to the U.S. Drug Enforcement Agency (DEA).

DRUG ABUSE PATTERNS AND TRENDS

Exhibit 1 presents trend data (2001–2004) on primary drugs of abuse among admissions in border and nonborder areas of New Mexico, as reported by the Behavioral Health Information System and submitted for inclusion in the Treatment Episode Data Set, maintained by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration. As shown, the proportions of primary admissions for methamphetamine and marijuana were higher in border than nonborder areas in 2004. In border areas, admissions for primary methamphetamine abuse increased nearly 6 percentage points from 2001 to 2004; there was a slight increase in the proportion of primary cocaine admissions but a decline in the proportion of marijuana admissions.

Exhibit 1. Primary Drugs of Abuse Among New Mexico Border and Nonborder Treatment Admissions, by Drug and Percent: 2001–2004

Drug	2001		2002		2003		2004	
	Border	Nonborder	Border	Nonborder	Border	Nonborder	Border	Nonborder
Total Admissions (N=)	699	6,464	573	5,534	576	5,177	438	3,725
Cocaine	3.3	6.4	5.1	6.7	4.9	8.0	5.0	7.8
Heroin	3.0	8.5	1.9	10.6	2.3	10.4	2.7	12.9
Methamphetamine	3.6	2.7	2.8	3.1	6.4	4.2	9.4	5.8
Marijuana	17.9	5.7	6.3	5.2	10.4	7.5	11.8	8.2
Alcohol	52.0	49.5	60.6	50.7	52.3	54.3	50.0	58.5
None/Unknown	20.2	27.2	23.3	23.7	23.7	15.6	21.1	6.8

SOURCES: Behavioral Health Information System (TEDS)

From 1995 to 2004, the five border counties accounted for 8 percent of drug overdose decedents in the State. The number of overdose deaths in border and nonborder areas, depicted in exhibit 2, show that the number of overdose deaths from prescription-type (Rx) drugs was significantly higher in border than nonborder areas, especially for deaths involving opioids other than methadone and for antidepressants. For all drug overdose decedents, the proportion of deaths caused by

methamphetamine and cocaine in border areas slightly exceeded the proportion in nonborder areas.

Other data show that decedents from border areas were significantly less likely than those from nonborder areas to be White (40 vs. 55 percent). Border area decedents were also significantly younger than nonborder decedents (median ages were 40.7 and 42.3, respectively).

Exhibit 2. Number¹ of Drug Overdose Deaths Involving Illicit and Prescription-Type (Rx) Drugs in New Mexico Border and Nonborder Counties, by Type of Drug and Percent: 1995–2004

Overdose Deaths	Border	Nonborder
Total Drug Overdoses (n=)	177	1,943
Total Illicit Drugs (Percent)	63	70
Any Rx Drug (Percent)	45	38
Illicit Drug (Percent)		
Heroin	41	50
Cocaine	40	37
Methamphetamine	6	5
Rx Drug (Percent)		
Methadone	8	13
Other Opioid	28	21
Tranquilizer/Muscle Relaxant	14	12
Antidepressant	14	9

¹Specific drugs are not mutually exclusive.
SOURCE: The New Mexico Office of the Medical Investigator

Among students in grades 9–12, the 2003 Youth Risk and Resiliency Survey found little difference between border and nonborder students in past-30-day use of cocaine and inhalants or in past-12-month use of

methamphetamine. Border students, however, were significantly less likely to report past-30-day use of marijuana.

Exhibit 3. Prevalence of Use of Selected Drugs by New Mexico Students in Border and Nonborder Counties, by Percent: 2003

Drug	Border Counties		Nonborder Counties	
	Number ¹	Percent	Number ¹	Percent
Marijuana	2,081	23.3	8,388	30.4
Cocaine	2,091	8.3	8,366	9.0
Inhalants	2,127	6.9	8,529	6.8
Methamphetamine ²	2,081	7.8	8,397	8.3

¹n=Number of students asked about a specific drug.
²Methamphetamine use is for the past 12 months; use of other drugs is for the past 30 days.
SOURCE: Youth Risk and Resiliency Survey

For the State overall, the DEA reports that trafficking in cocaine has increased, with multiple kilograms seized from trucks and other vehicles. The cocaine is typically destined for Denver and midwestern cities, but grams and ounces are readily available for local consumption. DTOs supply cocaine hydrochloride to

local crack distributors who covert it to crack. Ethnic gangs distribute the crack in urban areas, including schools. Black tar heroin is widely distributed and abused; it is most often smuggled across the northern New Mexico border. In Española Valley in the northern region, heroin overdose death rates are the

highest in the Nation. Most methamphetamine seized originates in Mexico and arrives from Los Angeles and Phoenix. Small clandestine labs operate in remote rural locations in southern New Mexico. Prescription drugs smuggled from Mexico contribute to the illegal distribution of prescription-type drugs in New Mexico. Marijuana is widely available in the State. Multi-pound and multiton seizures occur at all transportation terminals. Marijuana smuggled from Mexico is available at various locations throughout the State. (For more information, access the following: www.usdoj.gov/dea/pubs/states/newmexico.html.)

Sheriffs from the New Mexico border areas shared their experiences with the author regarding drug use within their jurisdictions. The common themes were...

- Methamphetamine is the drug of choice and represents the majority of the drugs distributed and abused in the area.
- Overall, the number of clandestine methamphetamine lab seizures appears to be decreasing, as low-cost, high-purity crystal methamphetamine from Mexico becomes increasingly available. The purity of the Mexican methamphetamine is 80 percent or greater, compared with the 20–40 percent purity from “mom and pop” methamphetamine labs.
- Violent crimes and firearm/property trading and burglaries have increased, and they are possibly related to the rising numbers of methamphetamine users and dealers in border areas.
- Marijuana is also widely distributed and used in border areas.
- The southeastern region of the State has experienced success through community coalitions involving law enforcement, parents, teachers, and other community stakeholders.

Drug Abuse Patterns and Trends in San Diego, California

Steffanie Strathdee, Ph.D.

Drug abuse indicators in San Diego in 2004 show...

- *Methamphetamine (MA) abuse indicators continue to be high, and community-based studies suggest that increasing numbers of MA users are injecting the drug.*
- *Heroin accounted for one-quarter of primary treatment admissions (excluding alcohol) and for 16 percent of ED reports for illicit drugs; however, less than 2 percent of all items analyzed by forensic laboratories contained heroin. Mexican black tar heroin remained readily available and was cheaper in San Diego than in other cities included in DEA's Domestic Monitor Program.*
- *Cocaine/crack abuse indicators remained relatively low and stable.*

DRUG ABUSE PATTERNS AND TRENDS

Methamphetamine (MA)

MA abuse indicators in San Diego show that it continues to be the major drug of abuse in the area. According to the California Alcohol and Drug Data System (CADDs), MA accounted for 36 percent of all primary treatment admissions and 45 percent of admissions excluding alcohol in San Diego County in 2004. Approximately 27 percent of all items analyzed by forensic laboratories and 27 percent of illicit drug emergency department (ED) reports in the Drug Abuse Warning Network involved MA. Demographic data on MA-involved ED visits show that approximately 69 percent of these patients were male, 45 percent were age 35 or older, 63 percent were White, and 20 percent were Hispanic.

In Mexico, most MA is produced in western States of the country, according to a 2005 National Drug Intelligence Center (NDIC) report. Since San Diego is a major distribution center for MA produced in Mexico (and in California's "super labs"), it is not surprising that MA is a major drug problem in the region. Price data from NDIC show that MA cost \$60 per gram in the last half of 2004.

There are growing concerns about increases in MA injection in San Diego. The 2004 treatment data show that injection was the primary route of administration for 16 percent of the MA treatment admissions. According to Dr. Thomas Patterson of the University of California at San Diego, two ongoing community-based studies found that 20 percent of MA-using heterosexuals and 30 percent of MA-using HIV-positive men who have sex with men (MSM) were injecting MA.

Heroin

In 2004, treatment admissions for primary heroin abuse (excluding alcohol) accounted for 25 percent of illicit drug treatment admissions. More than 61 percent reported using only heroin. Of the 2,810 primary heroin admissions in 2004, nearly 71 percent were male and nearly 58 percent were age 35 or older. Most were either White (52.0 percent) or Hispanic (38.4 percent). Eighty-seven percent injected heroin.

Heroin represented 16.4 percent of illicit drug reports in EDs reporting to DAWN in 2004. According to the DEA's Domestic Monitor Program, most heroin in 2003 was black tar heroin, which was 44.0 percent pure and sold for \$0.25 per milligram pure. Heroin in San Diego was the least costly of any recorded in cities covered by DMP.

Cocaine/Crack

Cocaine/crack abuse indicators in San Diego remain stable and low. Cocaine/crack accounted for 8.7 percent of treatment admissions (excluding alcohol) in 2004. Eighty percent of this admissions group smoked the drug, and 71 percent were age 35 or older. Nearly 60 percent were African-American, although African-Americans constitute only 6 percent of the San Diego County population.

Polydrug Abuse

Drug abuse indicators continue to show high levels of polydrug use among MA users in the San Diego area. Among HIV-positive MSM using MA in San Diego, the proportions using marijuana, gamma hydroxybutyrate (GHB), and cocaine in combination with MA were 33, 17, and 11 percent, respectively (Patterson, September 14, 2005). Treatment data show that 29 percent of primary marijuana abusers also used MA. In a 2005 study of injection drug users in San Diego's *sister city*, Tijuana, the drugs most commonly injected together in the same syringe were MA in combination with heroin and MA in combination with cocaine (Ramos, Lozada, Brower, Firestone, Ramos, Loza, Magis, and Strathdee, 2006).

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Patterson, Thomas, Ph.D., Department of Psychiatry, University of California at San Diego, personal conversation, 14 September 2005.

Ramos, R.; Lozada, R.; Brouwer, K.; Firestone, M.; Ramos, M.E.; Loza, O.; Magis, C.; and Strathdee, S.A. "High Prevalence of Injection Risk Behaviors Among Injection Drug Users in Two Mexican-U.S. Border Cities." Abstract accepted for presentation at the International Harm Reduction Association meeting, March 31–April 5, 2006.

Drug Use on the Border

Jane C. Maxwell, Ph.D.

HIV/AIDS in Texas

Although one-half of the AIDS cases in Texas in recent years are due to male-to-male sex, the proportion due to heterosexual transmission is increasing (see exhibit 1). The distribution in 2003 is different on the border, as compared to nonborder cases (see exhibit 2).

The majority of AIDS cases are among people of color (see exhibit 3), with case rates per 100,000 population higher in the nonborder area in 2003 (see exhibit 4). While the AIDS rate for Blacks in the nonborder area is the highest of all racial/ethnic groups and is increasing, the rate for Blacks on the border appeared to be increasing at a greater rate between 2002 and 2003 (see exhibit 5).

Risk Factors for Increases in HIV/AIDS on the Border

It is difficult to measure changes in HIV/AIDS rates since comparable county-level HIV/AIDS rates do not appear to be available on both sides of the border (Maxwell et al., in press). The risk of HIV/AIDS is heightened by high rates of border crossings and migration into United States (U.S.), particularly since most of the population crossing is young.

Drug users are at high risk of HIV due to sharing injecting equipment, burns and sores on lips from hot crack or methamphetamine pipes, and risky sexual behaviors, including trading sex for drugs or money, involvement in prostitution, disinhibition while under the influence of drugs, multiple partners, and participation in risky sexual behaviors. In addition, drug use patterns on both sides of the border are related to drug trafficking patterns.

Heroin admissions in both Mexican and U.S. treatment programs in states along the border are primarily injectors (see exhibit 6). Crack cocaine is the major form of cocaine abused in U.S. border States and is an emerging problem in Mexican border States (see exhibit 7). Smoked methamphetamine or "ice" (see exhibit 8) is a growing concern since it is a major risk factor for HIV/AIDS (Maxwell et al., in press).

Methamphetamine is the major drug problem for patients admitted to treatment on the Pacific side of the border, with heroin being a major problem in the central area, and cocaine the major problem on east-

ern side of the border around the Gulf of Mexico (see exhibit 9).

Trends in Drug Treatment Admissions to Programs in Webb County, Cameron and Hidalgo Counties, and El Paso County, Texas

Exhibits 10, 11, 12, and 13 show the different drug use patterns in these three areas. Wide variations in trends may reflect the start of a new program or the discontinuation of a program in a particular year.

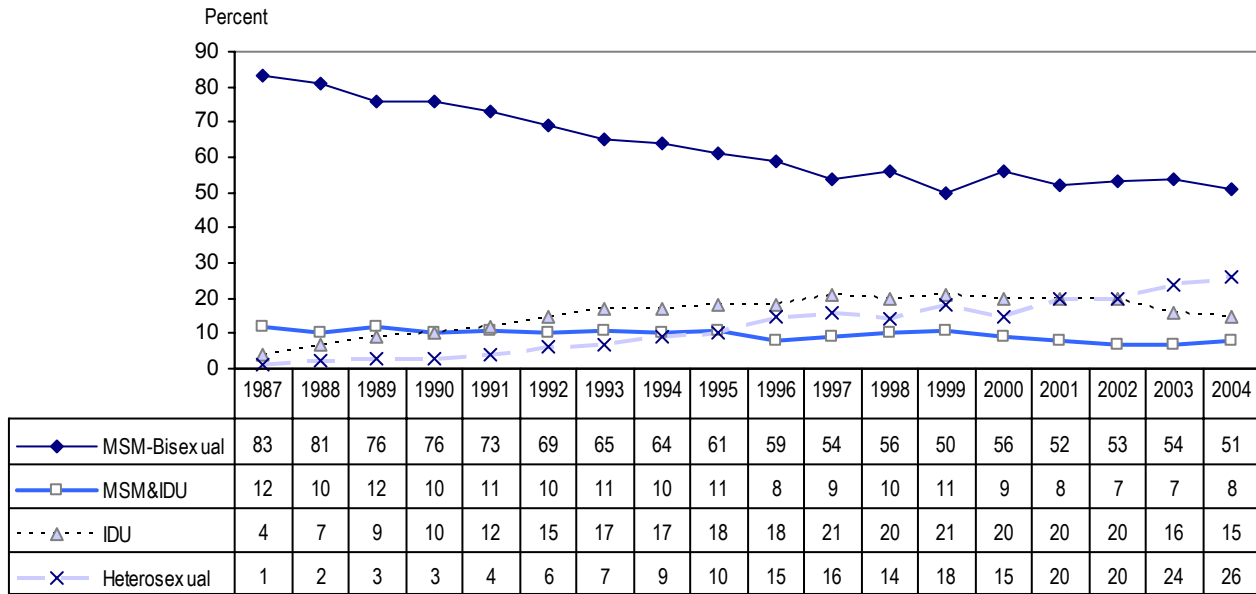
Risk Factors for HIV Related to Drug Use

The Texas Department of State Health Services collects data on behaviors of individuals who were seen in Counseling and Partner Elicitation Programs in 1999 and 2004. Since the same programs delivered these services in Laredo and in the Lower Rio Grande Valley in 1999 and 2004, it is possible to see the increases in use of various drugs while having sex (see exhibits 14 and 15). Note that use of heroin with sex and sex with injecting drug users decreased over time in the Valley, which is a reflection of the shift to crack cocaine in this region. The increased use of cocaine all along the Texas border is also shown in the 2004 Texas school survey, which found that 23 percent of high school seniors reported having ever used cocaine, as compared with 10 percent of nonborder seniors (see exhibit 16).

Data Sources

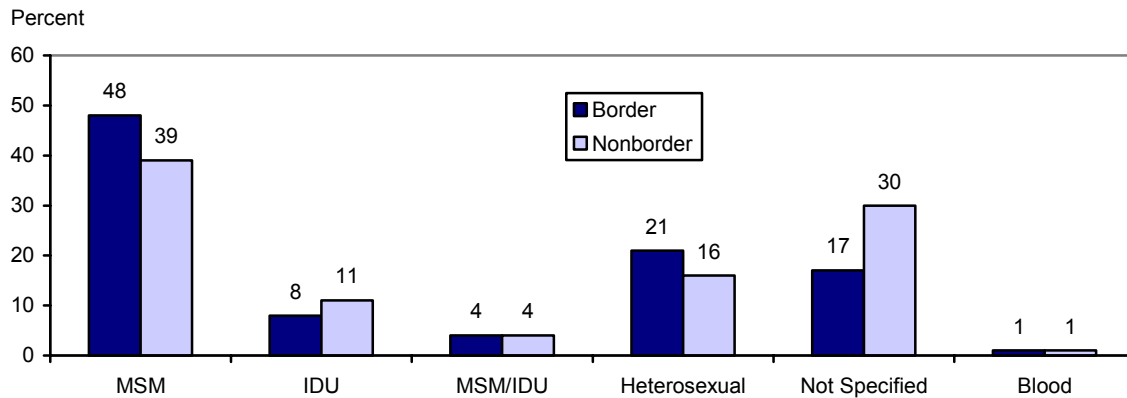
- Mexico—Epidemiological Surveillance System of Addictions
- United States—Substance Abuse and Mental Health Services Administration's Treatment Episode Data Set
- Texas—Department of State Health Services' Client Data System
- Texas—Department of State Health Services' Prevention Counseling/Partner Elicitation Programs
- Maxwell, J. C.; Cravioto, P.; Galvan, F.; Ramírez, M. C.; Wallisch, L. S.; and Spence, R.T. Drug use and risk of HIV/AIDS on the Mexico-U.S. border: A comparison of treatment admissions in both countries. *Drug and Alcohol Dependence* (in press)
- Liu, L. *Texas School Survey of Substance Use Among Students: Grades 7–12 2004*, Austin, Texas: Texas Department of State Health Services, August, 2005.

Exhibit 1. AIDS Cases in Texas, by Mode of Transmission and Percent: 1987–2004



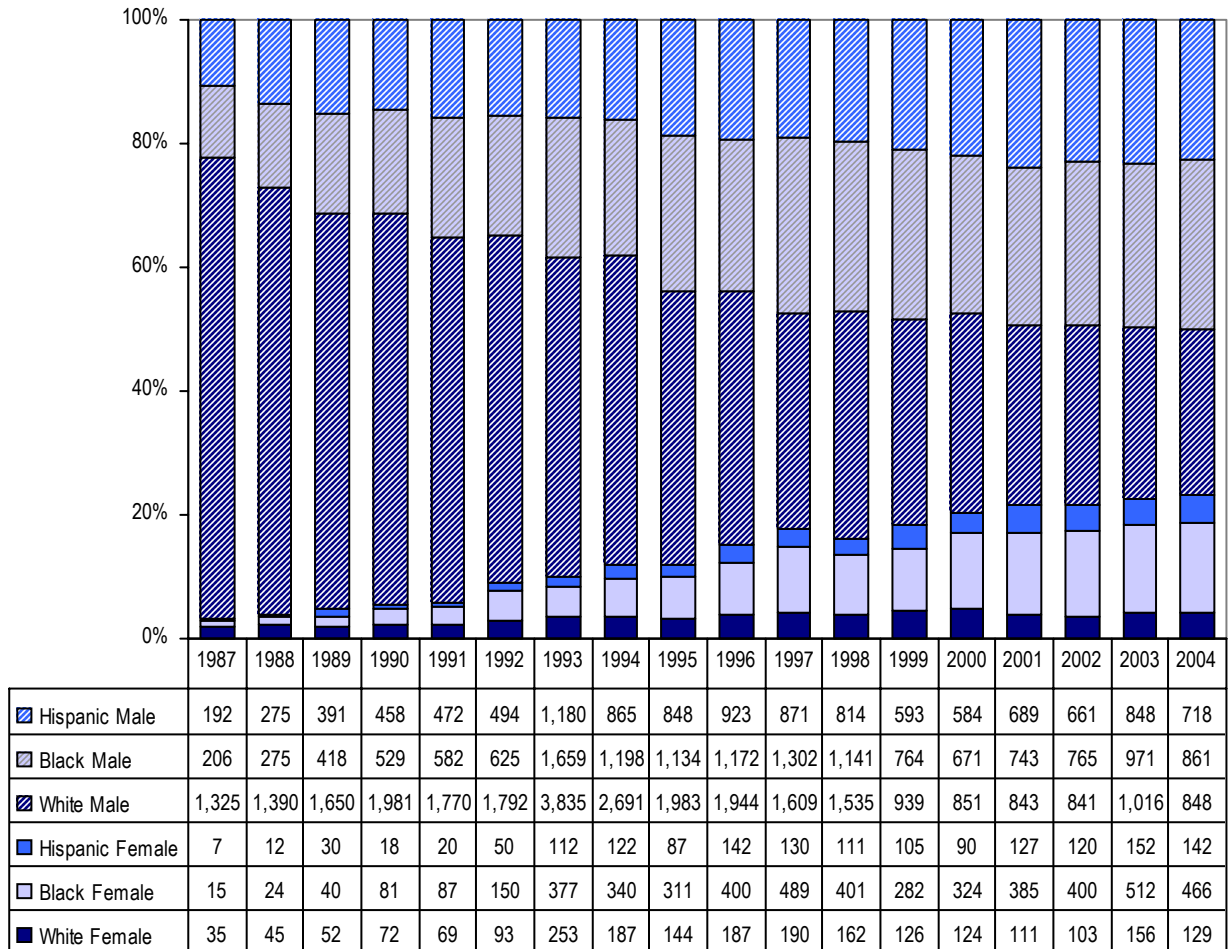
SOURCE: Texas Department of State Health Services

Exhibit 2. AIDS Cases in Texas Border and Nonborder Areas, by Mode of Transmission and Percent: 2003



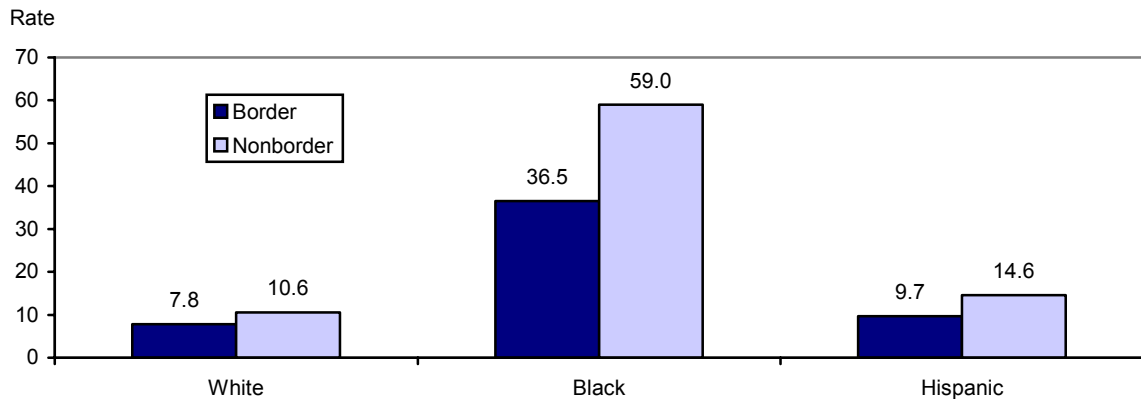
SOURCE: Texas Department of State Health Services

Exhibit 3. Texas AIDS Cases by Gender, Race/Ethnicity, Percent, and Number: 1987–2003



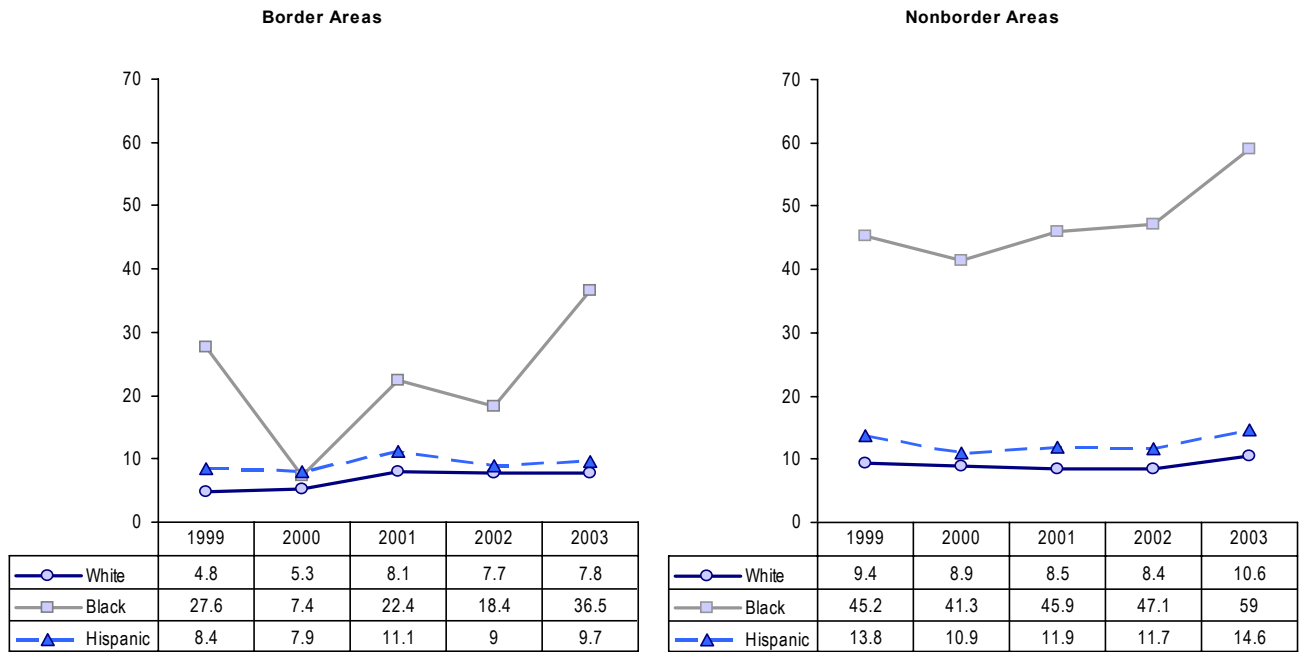
SOURCE: Texas Department of State Health Services

Exhibit 4. AIDS Rates per 100,000 Population by Race/Ethnicity in Texas Border and Nonborder Areas: 2003



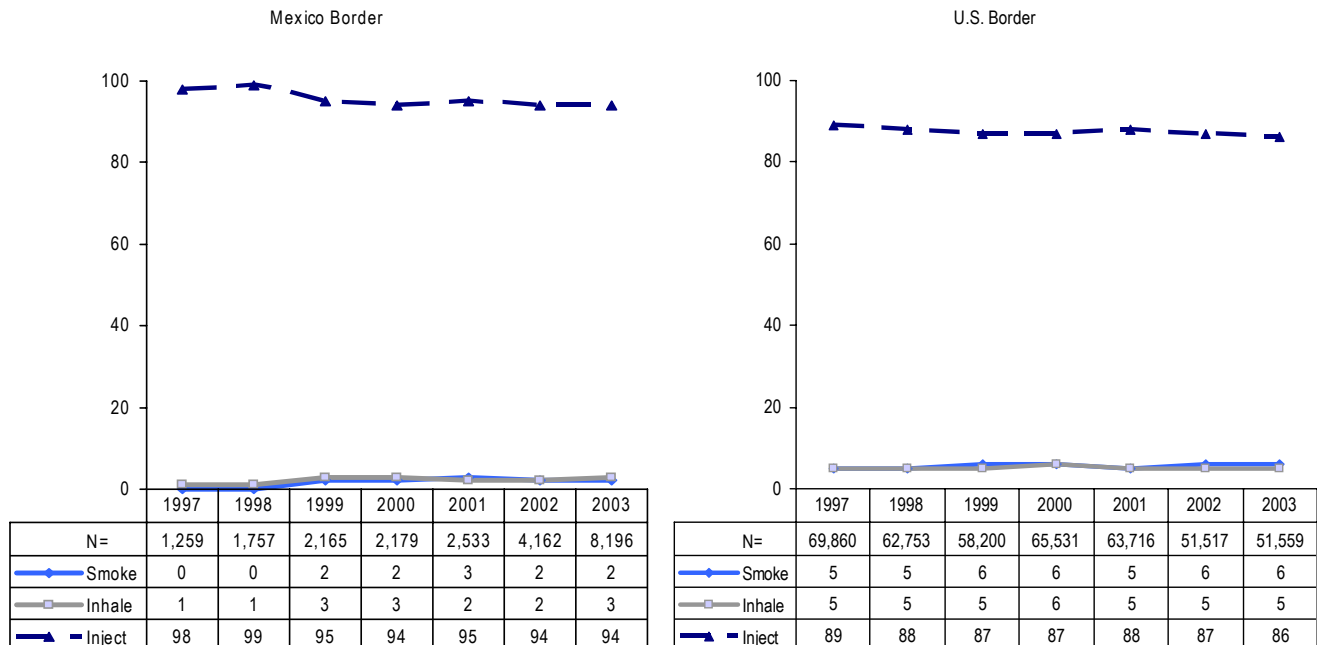
SOURCE: Texas Department of State Health Services

Exhibit 5. AIDS Rates per 100,000 Population by Race/Ethnicity in Texas Border and Nonborder Areas: 1999–2003



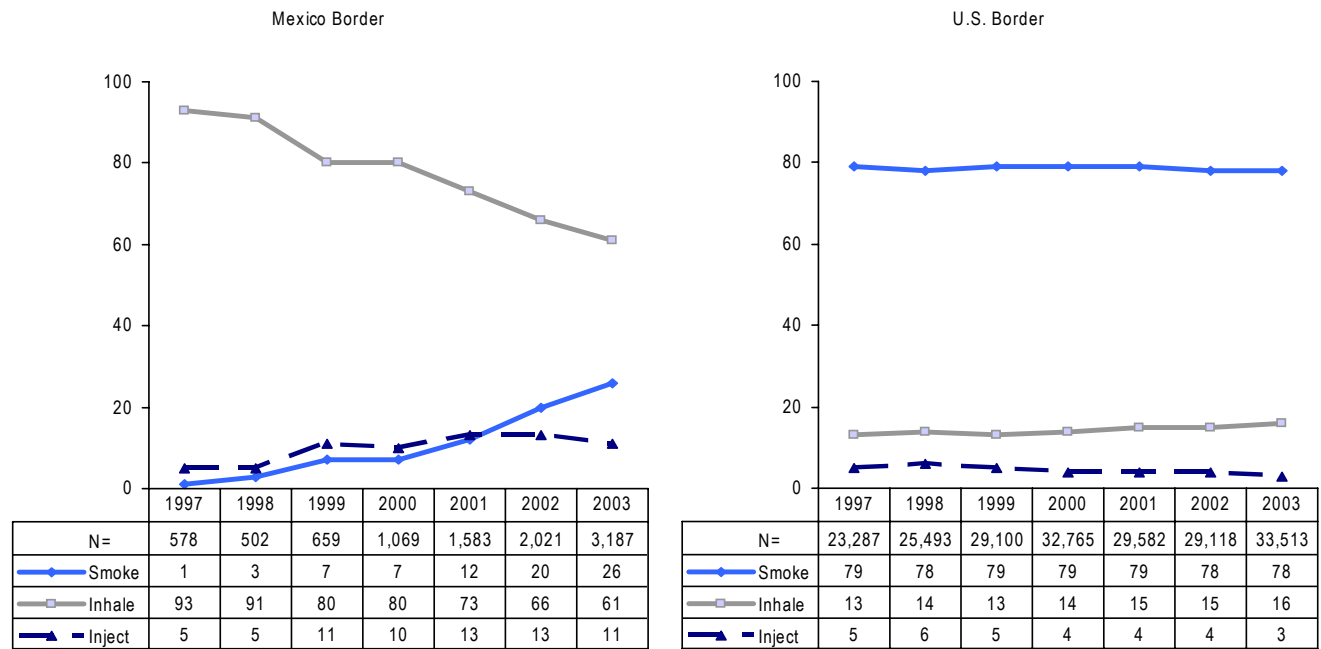
SOURCE: Texas Department of State Health Services

Exhibit 6. Route of Administration of Heroin Admissions to Treatment Programs in U.S. and Mexico Border States, by Percent: 1997–2003



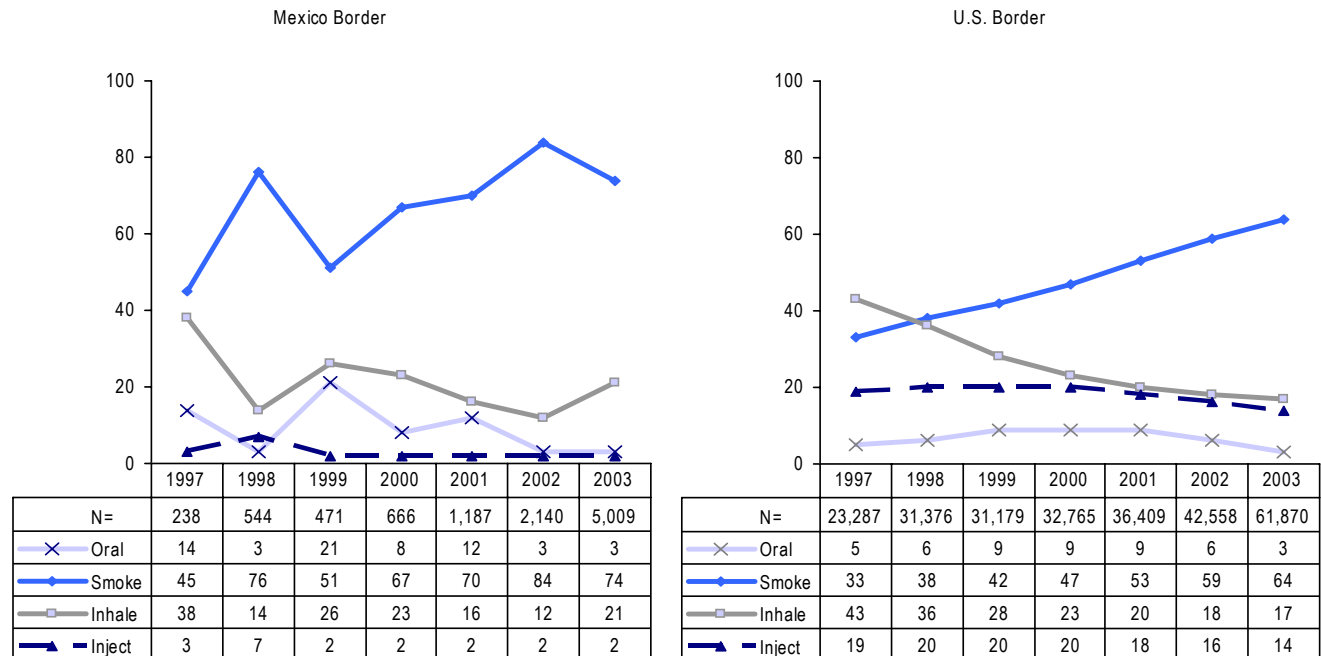
SOURCES: Epidemiological Surveillance System of Addictions (Mexico), and Substance Abuse and Mental Health Services Administration's Treatment Episode Data Set (United States)

Exhibit 7. Route of Administration of Cocaine Admissions to Treatment Programs in U.S. and Mexico Border States, by Percent: 1997–2003



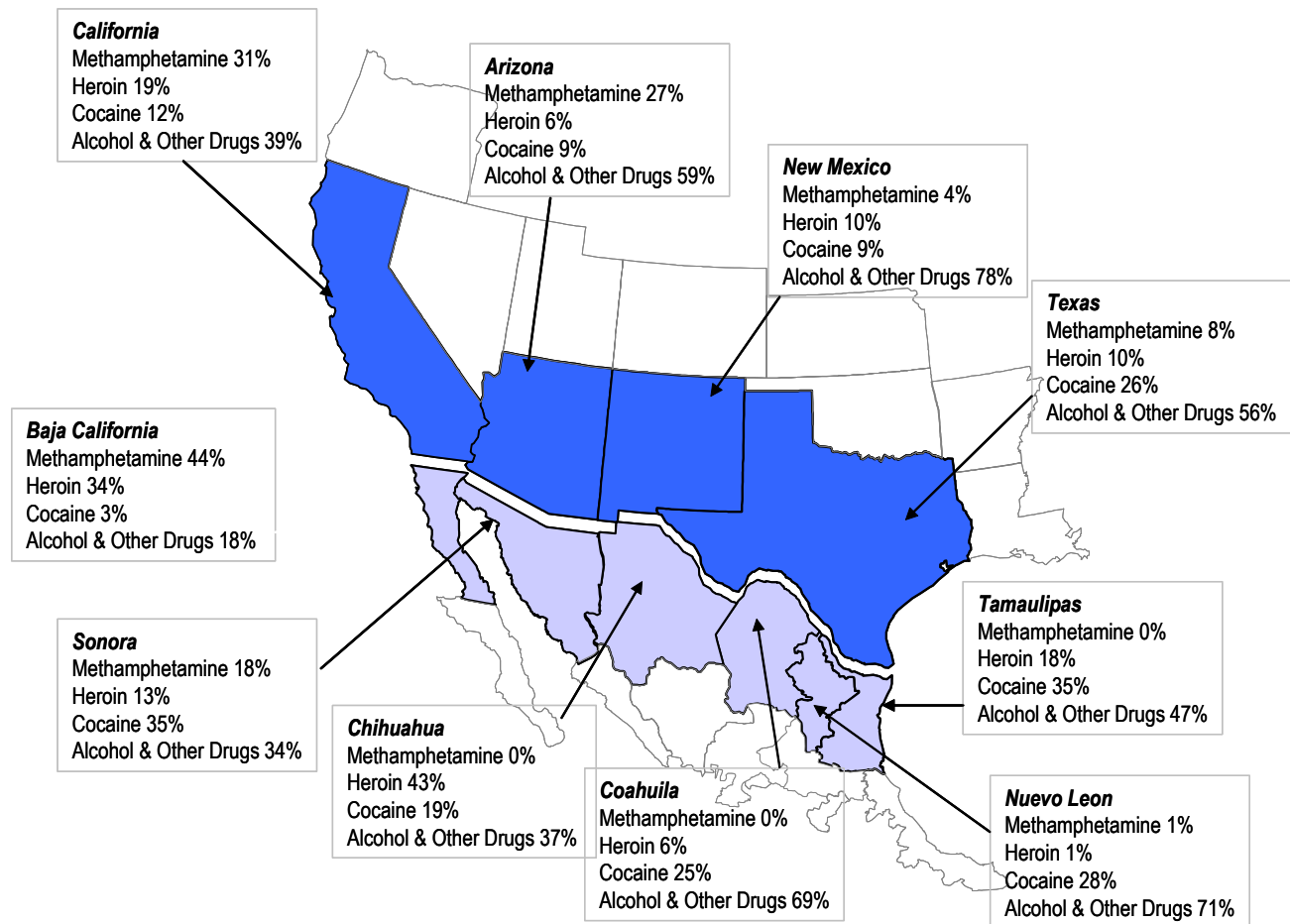
SOURCES: Epidemiological Surveillance System of Addictions (Mexico), and Substance Abuse and Mental Health Services Administration's Treatment Episode Data Set (United States)

Exhibit 8. Route of Administration of Methamphetamine Admissions to Treatment Programs in U.S. and Mexico Border States, by Percent: 1997–2003



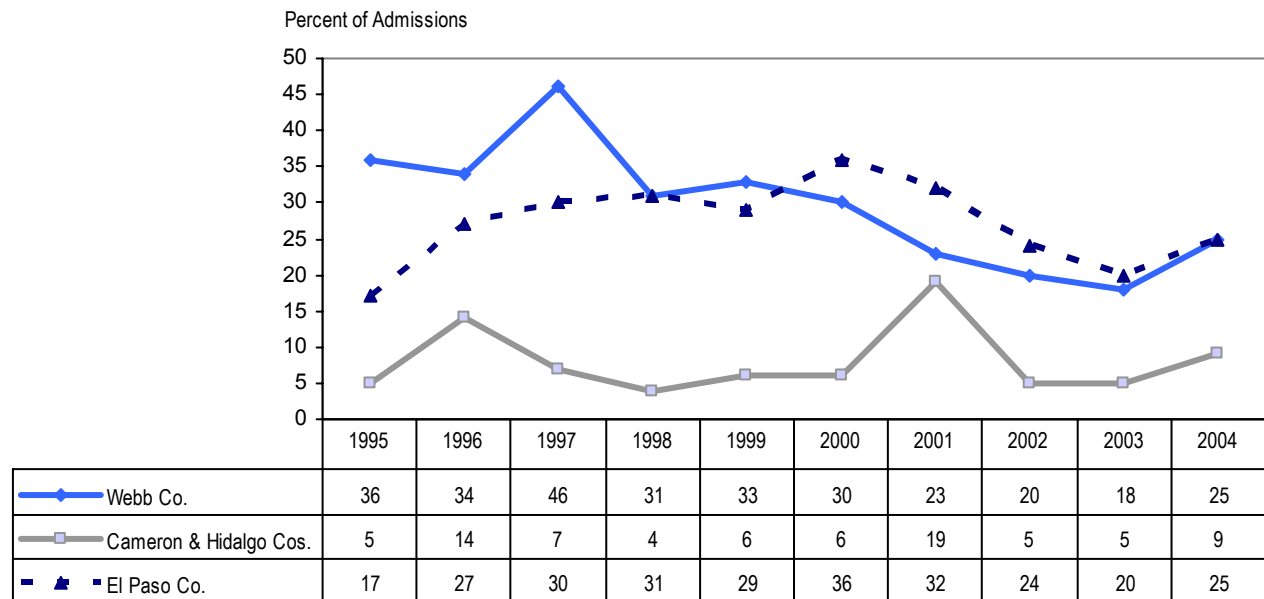
SOURCES: Epidemiological Surveillance System of Addictions (Mexico), and Substance Abuse and Mental Health Services Administration's Treatment Episode Data Set (United States)

Exhibit 9. Primary Drugs of Abuse at Admission to Treatment: 2003



SOURCE: Maxwell et al., 2005. Drug use and risk of HIV/AIDS on the Mexico-U.S. border: A comparison of treatment admissions in both countries. *Drug and Alcohol Dependence*

Exhibit 10. Percentage of Border Treatment Admissions for Heroin, by Location of Service¹: 1995–2004

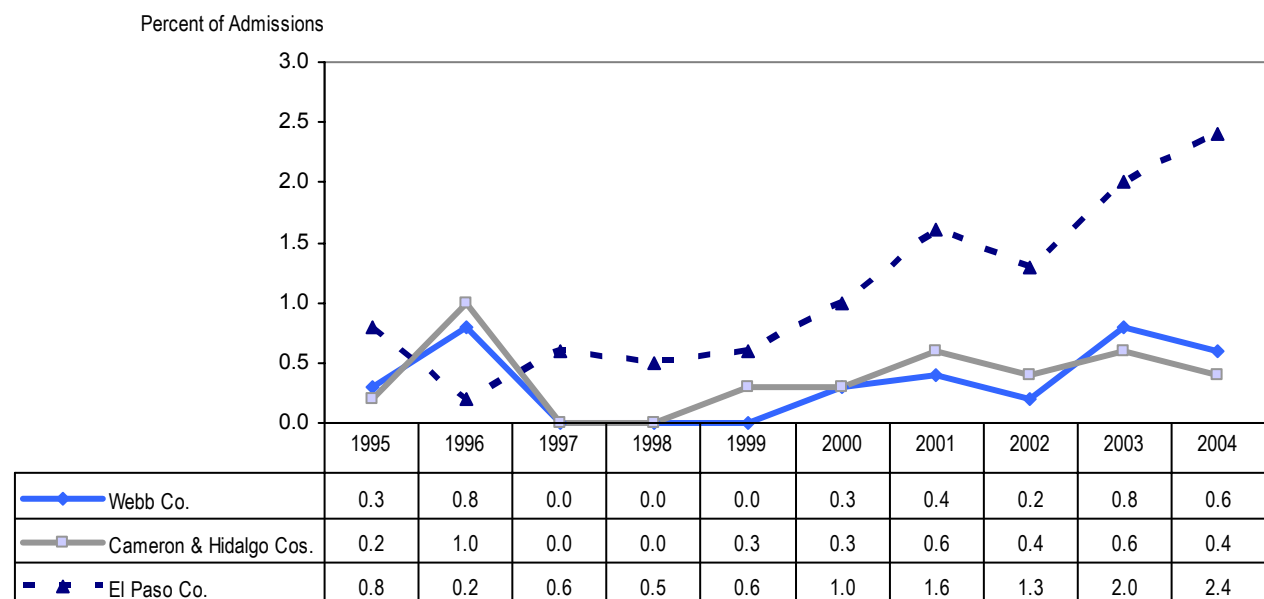


¹The number of total admissions by location and year are as follows and apply to exhibits 10–13:

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Webb Co.	299	134	188	332	685	810	861	1,240	967	959
Cameron & Hidalgo Cos.	847	312	693	1,273	1,754	1,305	1,064	1,543	1,576	1,384
El Paso Co.	1,145	1,158	1,632	2,281	2,524	2,095	1,798	1,471	1,888	2,420

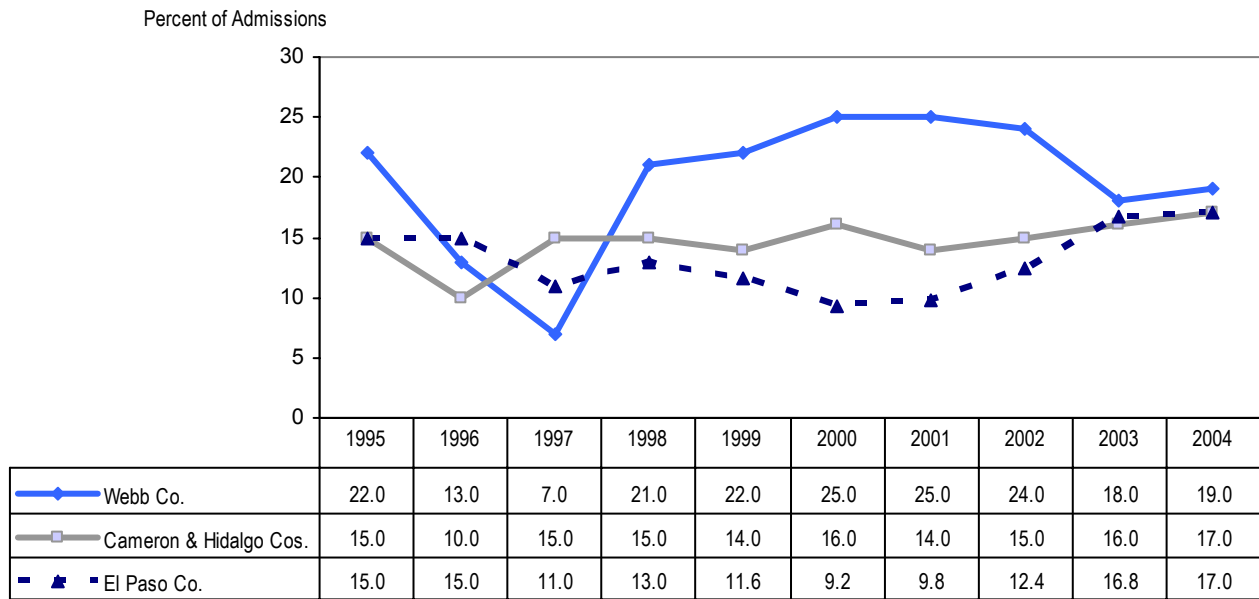
SOURCE: Texas Department of State Health Services

Exhibit 11. Percentage of Treatment Admissions for Methamphetamine, by Location of Service: 1995–2004



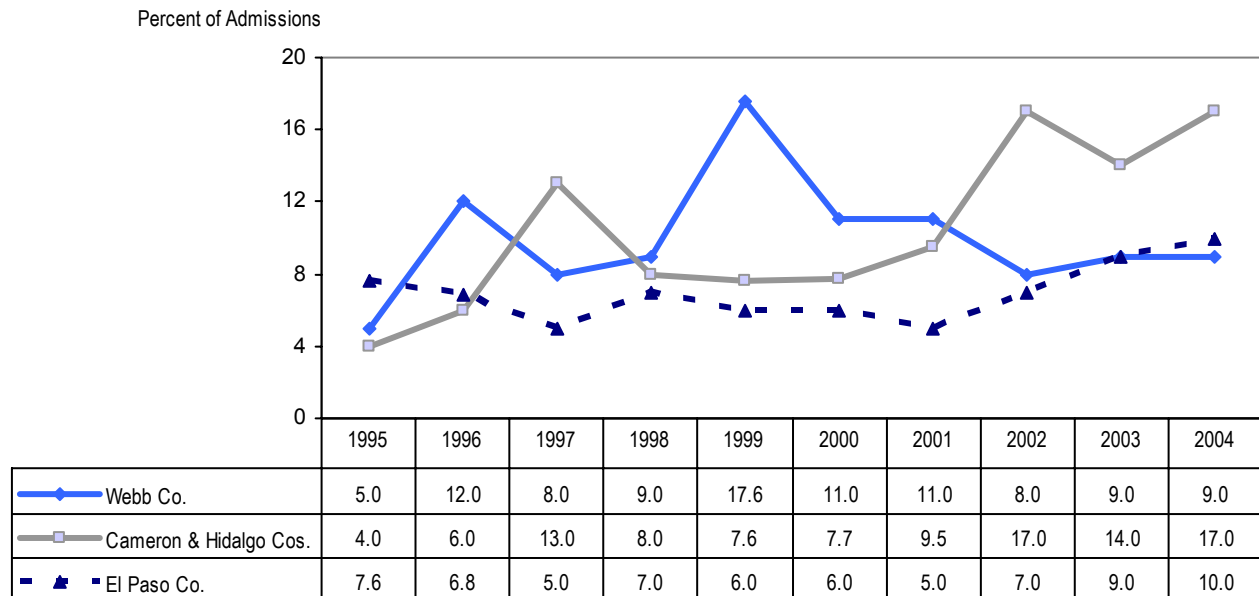
SOURCE: Texas Department of State Health Services

Exhibit 12. Percentage of Treatment Admissions for Powder Cocaine, by Location of Service: 1995–2004



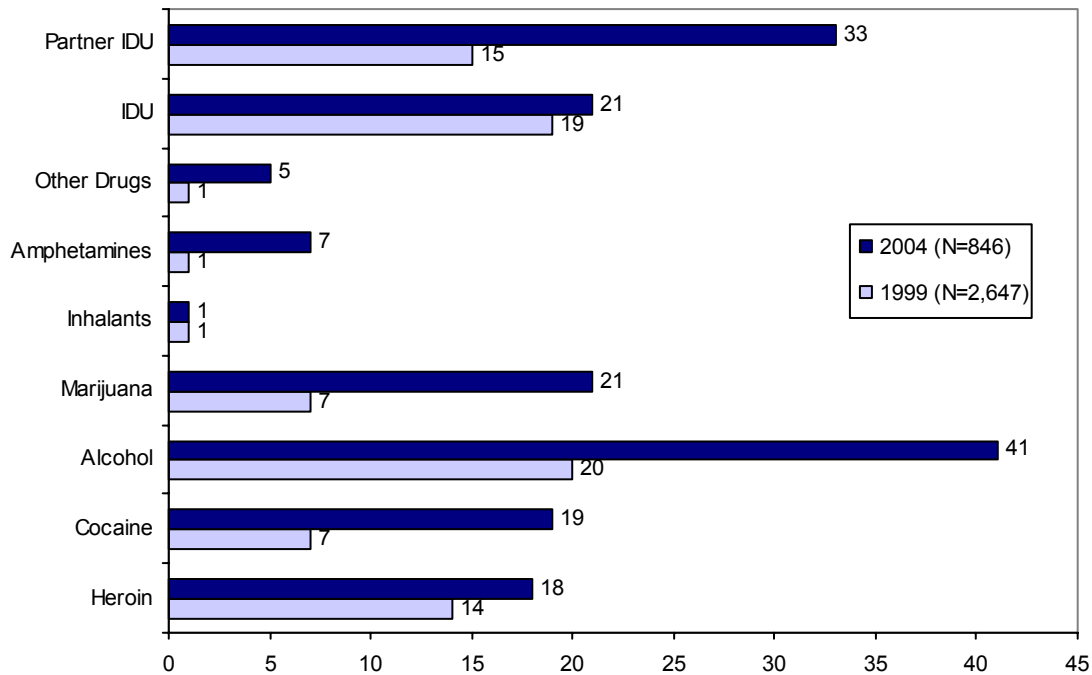
SOURCE: Texas Department of State Health Services

Exhibit 13. Percentage of Treatment Admissions for Crack Cocaine, by Location of Service: 1995–2004



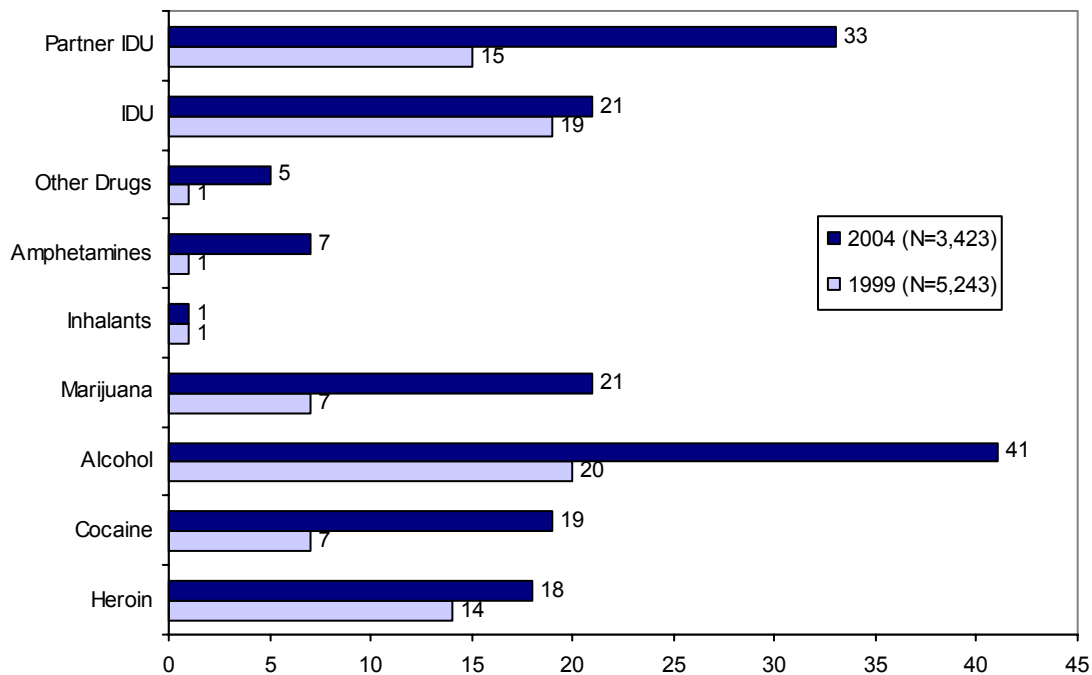
SOURCE: Texas Department of State Health Services

Exhibit 14. Past-Year Drug Use and Behaviors Reported by Persons Seen in Texas DSHS Prevention Counseling/Partner Elicitation Programs in Laredo (Webb County), Texas, by Percent: 1999 and 2004

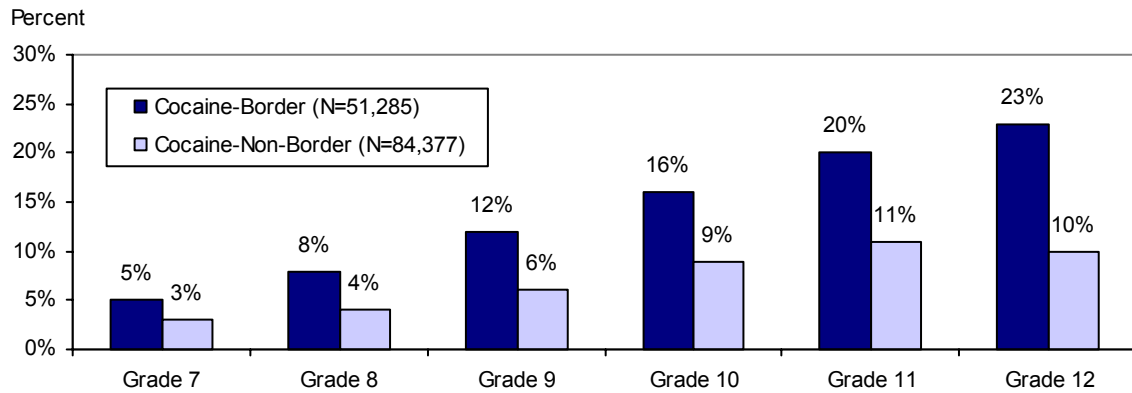


SOURCE: Texas Department of State Health Services

Exhibit 15. Past-Year Drug Use and Behaviors Reported by Persons Seen in Texas DSHS Prevention Counseling/Partner Elicitation Programs in the Lower Rio Grande Valley, by Percent: 1999 and 2004



SOURCE: Texas Department of State Health Services

Exhibit 16. Percentage of Texas Secondary Students in Border and Nonborder Areas Who Had Ever Used Powder Cocaine or Crack, by Grade: 2004

SOURCE: Liu, Texas School Survey of Substance Use Among Students: Grades 7–12 2004, Austin, Texas: Department of State Health Services, 2005.

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