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# Proceedings of the Border Epidemiology Work Group



## September 2004

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

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH  
NATIONAL INSTITUTE ON DRUG ABUSE  
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National Institute on Drug Abuse

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## Foreword

The eighth annual meeting of the Border Epidemiology Work Group (BEWG) was convened in Albuquerque, New Mexico, on September 16–17, 2004. 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).

The September 2004 BEWG meeting was focused on patterns and trends in methamphetamine abuse in border areas. The meeting was guided by the following premises:

- Methamphetamine abuse in some border areas is a serious problem.
- Methamphetamine abuse appears to be continuously spreading from west coast border areas eastward.
- Methamphetamine abuse problems on one side of the border will likely impact on the other side of the border.

- Through the collaboration of researchers, much can be learned about methamphetamine abuse on both sides of the border.
- Information obtained by the BEWG can help to inform policymakers and practitioners as to the nature and extent of current and emerging drug abuse problems in the border region.

The BEWG annual meetings continue to provide a forum for members to present, exchange, and review drug abuse data and information from existing sources on both sides of the border. Meetings are structured to provide researchers an opportunity to focus attention on findings that emerge and issues that are raised during discussions. Drug abuse patterns are documented over time to determine whether problems are spreading and, if so, where they are emerging. Members are encouraged to develop studies to address issues and questions raised by the BEWG. Through the publication of meeting proceedings and collaboration with other border organizations, members strive to achieve the goal of maximizing the usefulness of the BEWG information in developing and targeting appropriate prevention and treatment interventions. The findings on abuse, manufacturing, and trafficking of methamphetamine documented in this report, and the issues raised by meeting participants, should further the goal of maximizing the usefulness of BEWG findings to policymakers, program planners, and service providers on both sides of the border.

*Moira P. O'Brien*  
*Division of Epidemiology, Services and Prevention Research*  
*National Institute on Drug Abuse*  
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## Introduction

The eighth annual Border Epidemiology Work Group (BEWG) meeting was held on September 16–17, 2004, in Albuquerque, New Mexico, under sponsorship of the National Institute on Drug Abuse (NIDA), United States, and the Ministry of Health of Mexico (MHM). The meeting was focused on methamphetamine abuse in areas along the border of the United States and Mexico.

Moira O'Brien, Division of Epidemiology, Services and Prevention Research, NIDA, reviewed various reasons why this BEWG meeting was focused on methamphetamine abuse. It was pointed out that the abuse of this addictive stimulant has been spreading across the United States to different areas and different populations. Easily manufactured in a variety of forms (i.e., powder, "ice," and tablets), the drug is administered in different ways (i.e., orally, smoked, inhaled, or injected).

Classified as a Schedule II drug, methamphetamine is a powerful long-acting psychostimulant with high potential for abuse. It has a long duration of action (8 to 24 hours when smoked) and remains in the body for a relatively long period (about one-half of the drug remains in the body 12 hours after consumption).

Abusers of this drug may experience a range of psychological and physiological effects including increased wakefulness and physical activity, and decreased appetite. Chronic, long-term use can lead to psychotic behavior, hallucinations and stroke.

Ms. O'Brien briefly described how NIDA's Community Epidemiology Work Group (CEWG) functions and presented some of the findings on methamphetamine abuse that were reported by this group at recent meetings. It was noted that the CEWG has been assessing and monitoring drug abuse patterns and emerging problems for more than 28 years. It is comprised of researchers from 21 sentinel areas in the United States who have extensive experience in drug abuse at the local and national level, and knowledge of their local communities, drugs, and drug-abusing populations. The CEWG researchers draw on

existing data from national and local sources and gather qualitative information from key informants and a variety of other sources to determine what is "happening behind the numbers." With regard to methamphetamine, one of the problems is that methamphetamine may not be distinguished from other stimulants, such as amphetamines, in some of the data sources. Many data sources do not distinguish between the different forms of methamphetamine (e.g., powder, ice, tablets).

Key findings, related to methamphetamine abuse indicators that were reported at the CEWG meetings in December 2003 and June 2004, included the following:

- Methamphetamine abuse indicators remained very high in Honolulu and west coast and southwest areas. Based on indicators, methamphetamine abuse continued to spread to areas east of the Mississippi river.
- Production, availability, and abuse of this drug are increasingly reported in nonmetropolitan areas. Small methamphetamine clandestine labs have been seized in rural areas throughout the United States.
- The high potency, smokeable form of methamphetamine known as "glass" or "ice" was reported to have become more available in many areas of the country.
- Methamphetamine has been spreading to different populations, e.g., higher proportions of Hispanics are entering treatment for primary methamphetamine abuse in some areas of the country.
- Drug abusers may be switching to methamphetamine from other drugs; e.g., MDMA abusers in Atlanta and Miami/Ft. Lauderdale are reported to have been switching from MDMA to methamphetamine.





## Key Findings and Research Needs

Data from the September 2004 Border Epidemiology Work Group meeting point to escalating problems associated with the manufacture, trafficking, and abuse of methamphetamine in U.S.-Mexico border areas, as highlighted in the *Key Findings* that follow. In meeting discussions, BEWG participants identified areas in which further research is needed (*see Research Needs below*).

### Key Findings

Indicator data show that methamphetamine abuse continues at high levels in western border areas near the Pacific Ocean and that abuse of the drug is increasing in central and western border areas. Methamphetamine abuse indicators remain at low levels in eastern areas along the Texas-Mexico border, but they but show some signs of increasing.

#### Western Border Areas

Findings from indicator data on methamphetamine abuse, manufacture, and trafficking in western border areas are briefly summarized below:

- **Tijuana and San Diego: Treatment data** from these *sister cities* show that high proportions of treatment clients report methamphetamine as their primary drug of abuse...
  - In Tijuana, 63 percent of patients in nongovernment treatment centers (NGCs) and more than 43 percent of those in government treatment centers (GTCs) in 2001 reported methamphetamine as their primary drug (current drug of impact).
  - In San Diego, 42 percent of treatment clients in 2003 reported methamphetamine as their primary drug of abuse, and 39 percent in 2002.
- **Mexicali and Imperial County: Treatment data** from these *sister areas* also show significant proportions of clients reporting methamphetamine as their primary drug of abuse...
  - In Mexicali, 65 percent of GTC patients in 2001 reported methamphetamine as their primary drug.
  - In Imperial County, California, 29 percent of the clients in fiscal year 2003–2004 were

primary methamphetamine abusers, and 27 percent in 2002.

- **Seizure data** from the U.S. Drug Enforcement Administration (DEA) and Mexico's Prosecutor General's Office (PGR) point to increases in seizures of methamphetamine...
  - PGR data show that seizures of methamphetamine exceeded those for heroin from 2000 to June 2004, with seizures being very high in the State of Baja California.
  - DEA data show increases in methamphetamine lab seizures in the northern areas of Mexico and at the California Ports of Entry (POEs). In Imperial County, 38 pounds of methamphetamine were seized in the first 8 months of 2003, compared with 20 pounds during all of 2003.
- **Arrest data** from the Guardian Council of Minors in the first half of 2004 show that 24 percent of juvenile arrestees in Tijuana had used methamphetamine, as had 15 percent of those in Mexicali. In San Diego, the proportion of adult male arrestees testing positive for methamphetamine increased from 32 percent in 2002 to 36 percent in 2003.

#### Central Border Areas

Indicator data from central border areas suggest relatively high and increasing levels of abuse and trafficking of methamphetamine...

- **Treatment data** from central border areas in Mexico show that 34 percent of the patients in the first half of 2004 reported methamphetamine as their primary drug. Data from a 2001 survey show that 28–30 percent of GTC patients in central area programs had ever used methamphetamine. In Arizona, rates of primary methamphetamine treatment admissions increased 375 percent in Yuma County from 1999 to 2003 (from 141.2 to 645.4 per 100,000 population); rates in Santa Cruz/Cochise Counties increased 398 percent during that time period (from 47.1 to 234.5).
- **Seizure data** from the PGR show high levels of seizures in the State of Sonora. On the U.S. side, the DEA reports increases in seizures of methamphetamine in Arizona and New Mexico.

Clandestine laboratory seizures in New Mexico rose from 47 in 1999 to 190 in 2003.

- **Hospital data**, presented by Arizona representatives, show that amphetamine (including methamphetamine) rates of hospital-related discharges increased in Yuma County from 1995 to 2003 (from 69.1 to 82.7 per 100,000 population); those in Pima County during the same time period also increased (from 29.0 to 78.4). Rates of methamphetamine hospitalizations (any diagnosis) in New Mexico increased in border areas from 1998 to 2002, from 18.60 to 30.86 per 100,000 population.
- **Mortality data** from New Mexico show higher rates of methamphetamine overdose deaths in 2003 in southern areas than in other areas of the State.

### ***Eastern Border Areas***

Indicators of methamphetamine abuse along the Texas-Mexico border continued to be low:

- **In Mexico's eastern border areas**, methamphetamine was not a major drug of impact in any treatment centers in 2001; only Monterrey reported any juvenile arrestees using methamphetamine (0.5 percent). Small proportions of students in grades 7–12 in Tamaulipas admitted to ever using methamphetamine (2.8 percent of males and 2.1 percent of females), and seizures of methamphetamine in eastern areas were cited only in Nuevo Leon, which touches on the border.
- **In Texas**, treatment admissions for primary methamphetamine abuse continued to be low, but they did increase from 0.2 percent of all admissions in 1992 to 1.4 percent in the first half of 2004. The Texas Department of Public Safety reported small percentages of drug items analyzed in 2003—less than 1.0 percent of all items in McAllen and Laredo and 4.6 percent in El Paso were identified as methamphetamine. A household survey of adults found lifetime use of methamphetamine higher among respondents in El Paso (5.9 percent) than among those in the Lower Rio Grande Valley (2.4 percent) or the colonias (2.5 percent). Of interest in this three-area household survey is the fact that methamphetamine users were more likely than users of other drugs to be drug dependent (21 vs. 7 percent) and to be involved in drug possession or sales (29 vs. 6 percent).

### **Research Needs**

BEWG participants stressed that there are unique opportunities to conduct drug abuse research on the border, and they encouraged cross-border and cross-national collaboration in the planning and implementation of research studies. There was consensus that cross-border research could significantly contribute to the advancement of scientific knowledge on border substance abuse issues and that it could provide information needed to effectively plan and deliver culturally appropriate prevention interventions and treatment services to residents on both sides of the border. It was suggested that the Hispanic Science Network on Drug Abuse could be instrumental in helping to link U.S. and Mexican researchers and in promoting the development of collaborative projects focused on priority research issues.

Research needs pertaining to methamphetamine abuse in the border area were identified by BEWG participants during discussions:

- Assess the nature and extent of methamphetamine abuse in...
  - High-risk populations (e.g., bus/truck drivers, female prostitutes, laborers)
  - Juveniles
  - Nonurban areas (e.g., colonias, areas outside cities)
- Conduct household and school surveys on both sides of the border utilizing comparable methodologies to determine, for example...
  - The prevalence of methamphetamine and other drug use by demographic characteristics and type of geographic area
  - Attitudes and behaviors related to use of methamphetamine and other drugs
  - Protective factors
- Conduct studies of primary methamphetamine abusers at treatment entry to assess the nature and extent of methamphetamine abuse, use of other drugs, and the problems experienced, by demographic characteristics
- Assess the relationship between the abuse of different types of methamphetamine and social and cultural factors, including levels of acculturation among immigrants

- Conduct natural history studies of methamphetamine abusers to determine...
  - Why and how methamphetamine was first used
  - Why and how methamphetamine is currently used
  - The association between methamphetamine use and the use of other substances (e.g., cocaine, heroin, marijuana)
  - The transition from other drugs to methamphetamine and the reasons for the transition
- Assess the relationship between methamphetamine abuse patterns and “supply side” factors, such as...
  - The sources of methamphetamine and trafficking patterns (i.e., locations, types of laboratories)
  - Types (i.e., “ice,” powder, or tablets) of methamphetamine by area and type of population
  - Purity and price of methamphetamine by geographic area
- Evaluate the effectiveness of prevention interventions directed to different populations at risk for methamphetamine abuse
- Evaluate the effectiveness of methods and programs designed to treat different methamphetamine abuse populations

# National Institute on Drug Abuse International Research Program

*Steve Gust, Ph.D.*

NIDA's International Research Program was established about 30 years ago. The program includes the following two primary activities:

- Research training through the Visitors Fellowship Program
- Collaborative international research projects (Currently, there are about 150 research projects involving researchers from the United States and other countries.)

The international program has both a scientific and a public health mission. These missions are briefly described below.

## **Scientific Mission**

Through this initiative, unique research opportunities are identified and developed, including gaining access to different populations. For example, Iceland provides access to a homogeneous population (similar genetic backgrounds) for research. Southwest

China provides access to a population in which heroin is the drug used almost exclusively.

## **Public Health Mission**

As the largest supporter of drug abuse research, NIDA has assumed responsibility for helping other countries in the world address health issues related to drug addiction.

The United States and Mexico established a binational agreement to explore ways of working together to address problems of mutual interest. Drug abuse among populations along the border is clearly one of the issues that have been identified. It is being addressed through the research conducted by the BEWG, and there are now growing opportunities for collaborative efforts. The Hispanic Science Network on Drug Abuse is in an excellent position to identify the resources and help generate support for drug abuse research needed on the border.

# The Hispanic Science Network on Drug Abuse: Collaborative Research

*Antonio Cepeda-Benito, Ph.D.*

The National Hispanic Science Network on Drug Abuse (NHSN) was established in 2000 through a contract from NIDA to the University of Miami, Department of Psychiatry and Behavioral Sciences. An international component was established in 2004.

The missions of NHSN are to improve the health of Hispanics through the following strategies:

- Increasing the amount and quality of interdisciplinary and transnational research on drug abuse
- Fostering the development of Hispanic scientists in drug abuse research

Organizationally, several committees were or are being established by NHSN, including the following:

- Steering Committee
- Conference Planning Subcommittee
- International Science Research Collaboration (ISRC) Subcommittee
- Membership Subcommittee
- Mentoring and Training Subcommittee
- Strategic Plan on Hispanic Drug Abuse Subcommittee
- Summer Research Training Institute Subcommittee

The membership of NHSN includes research scientists, graduate students, organizational partners, Federal alliances, and international members. International members are research scientists affiliated with a research-related institution or organization from the Spanish-speaking world. Most of the current international members are research scientists from Mexico, but there also a few members from Spain and Colombia. A goal of the ISRC Subcommittee is to increase the international diversity of its membership.

Recent and upcoming NHSN meetings include those listed below:

- *The Summer Research Training Institute on Hispanic Drug Abuse*, held at the University of Houston on June 1–8, 2004. The focus of the Institute was on the development of Hispanic researchers. The students who participated received stipends for participating in the 8-day training program.
- The 4th National Conference: *A Roadmap for Hispanic Drug Abuse Research*, scheduled for October 12–14 in San Antonio, Texas. A 1-day preconference on *International Science Research Collaboration* is scheduled on the day (October 11) prior to the national conference. The national conference will include presentations, roundtables, workshops, and social network activities.

A Web site has been established by NHSN: <[www.hispanicscience.org](http://www.hispanicscience.org)>. The Web site includes the following:

- A list of its members and their contact information.
- An *Archive of Measures Used With Hispanics*. The Archive is an online repository of research measures translated into Spanish and is used in studies of Hispanic samples
- *Blending Research and Practice Survey*

The Web site is under development, but it will include a list of international members, their affiliations, and a description of their research interests.

The NHSN is interested in having members of the BEWG participate in the 1-day ISRC meeting that precedes the annual National Conference of the NHSN. The mission of the ISRC is to improve the health of Hispanics and benefit from the unique “hermandad” among Hispanics around the World. The goals of the ISRC are as follows:

- To increase the amount and quality of collaborative research between U.S.-Hispanic and international-Hispanic investigators
- To foster the development of U.S.-Hispanic and international-Hispanic scientists in drug abuse research

- To facilitate the exchange of scientific-based knowledge on drug abuse generated in Hispanic communities or by Hispanic investigators across the world

The ISRC Subcommittee believes that the research promoted by the BEWG fits the mission of the

NHSN and would like to introduce its members to BEWG representatives and their research. The ISRC Subcommittee invites the BEWG members to discuss the possibility of organizing a joint meeting, or to some extent, planning for overlapping annual meetings by both groups.

## Background on Methamphetamine Abuse in Mexico

*Patricia Cravioto, Ph.D., Pablo Kuri, M.D., M.Sc., Fernando Galván, M.Sc., and Roberto Tapia-Conyer, Ph.D.*

Background information from law enforcement efforts, collected through Mexico's Epidemiologic Surveillance System of Addictions (SISVEA), shows that methamphetamine seizures and trafficking have been increasing:

- The quantity of methamphetamine seized increased dramatically from 1994 (7.6 kilograms in June) to 2003 (302.6 kilograms in June), and it continued to be substantial in June 2004 (162.9 kilograms).
- Since 2000, the quantity of methamphetamine seized has exceeded that for heroin, but it continues to be much less than the quantity of cocaine seized.
- The quantity of methamphetamine seized is higher on the northern border than in other areas of Mexico.
- Methamphetamine trafficking routes tend to be directed toward the border; the drug is smuggled in various ways (e.g., in hidden compartments in vehicles, in containers with food labels, in clothing and footwear).
- Methamphetamine is known by many different names and can be obtained from a variety of sources.

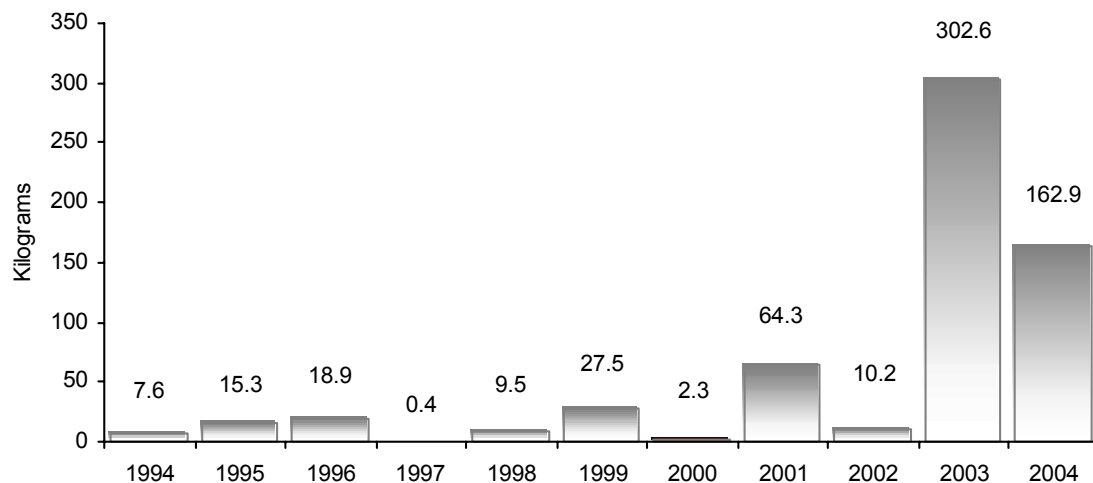
The data also show the following:

- The percentages of patients reporting methamphetamine as their drug of impact (current main drug of abuse) increased substantially from 1996 (3.2 percent) to the first half of 2004 (17.4 percent) and are higher along the northern border.
- There are many problems associated with collection of information on methamphetamine abuse, including the many names by which the drug is known and the many settings in which the drug is used.

### Seizure Data

In 1994, Mexico's Prosecutor General's Office (PGR), as part of its mission to guard against health crimes, warned that methamphetamine was becoming a serious problem in the country. Steps were quickly taken to begin monitoring this drug more closely, and SISVEA began to track seizure data from the PRG. As shown in exhibit 1, only 7.6 kilograms of methamphetamine were seized in Mexico in June 1994. In June 2003, the quantity of methamphetamine seized by law enforcement authorities increased dramatically to 302.6 kilograms, and in June 2004, 162.9 kilograms were seized.

**Exhibit 1. Kilograms of Methamphetamine Seized Each June: 1994–2004**



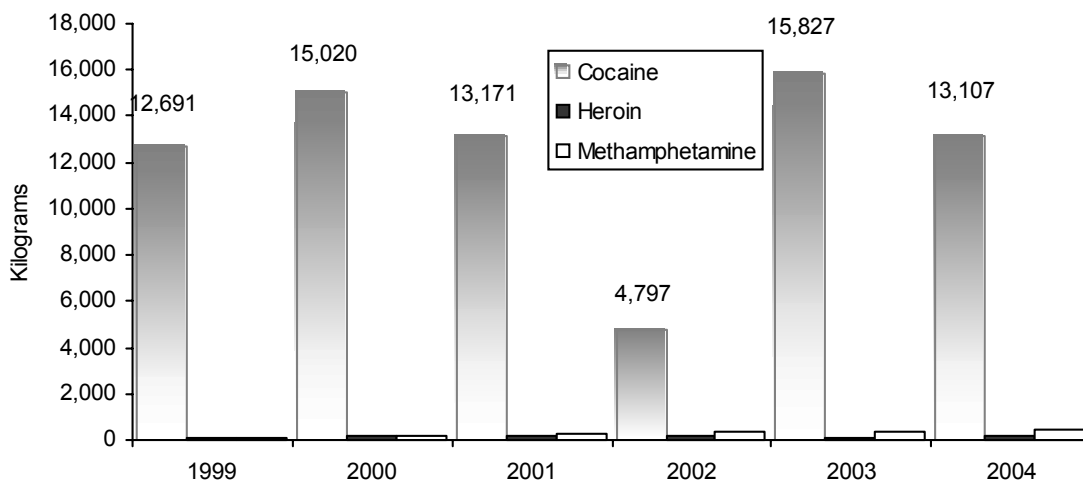
SOURCE: SISVEA-PGR



Although the quantities of cocaine seized in Mexico far exceed those for other drugs, the quantity of methamphetamine seized has increased since 1999, as noted earlier. Since 2000, more methamphetamine

than heroin has been seized in Mexico. In the first half of 2004, 434 kilograms of methamphetamine were seized, compared with 154 kilograms of heroin (see exhibit 2).

**Exhibit 2. Kilograms of Cocaine, Heroin, and Methamphetamine Seized in the First Half of Each Year: 1999–2004**

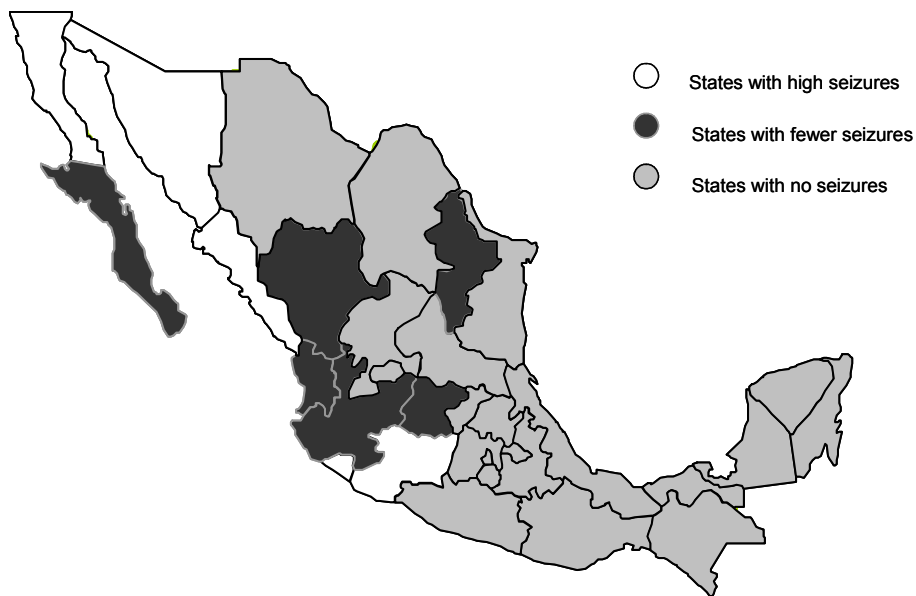


SOURCE: SISVEA-PGR

The number of methamphetamine seizures in Mexico varies by geographic area. The map below (see exhibit 3) depicts the areas in Mexico that had the highest number of methamphetamine seizures (white) in the first half of 2004, the areas that had some but fewer seizures (black), and those that have had no seizures (gray). As shown, most of the seizures have

been in the border States of Baja California and Sonora on the northern border and Itacan near the central western area. No methamphetamine seizures were made in the border areas of Chihuahua, Coahuila, and Tamaulipas. Nuevo Leon, which also touches the border, had relatively fewer seizures than States on the northwestern border.

**Exhibit 3. Methamphetamine Seizures in Mexican States: First Half of 2004**



SOURCE: SISVEA-PGR

### Trafficking of Methamphetamine

Exhibit 4 depicts the main methamphetamine trafficking routes in the first half of 2004. As shown, the

trafficking routes tend to be directed to the border, especially to the northern areas of Baja California and Sonora. Some of the routes are initiated at Michoacan and Monterrey.

**Exhibit 4. Main Methamphetamine Trafficking Routes in Mexico: First Half of 2004**



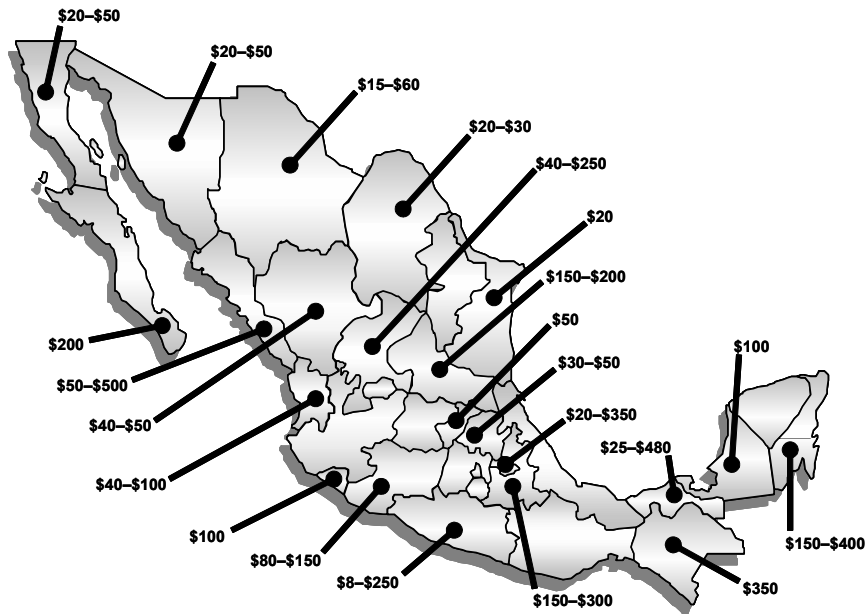
SOURCE: SISVEA-PGR

### Methamphetamine Prices

Prices for methamphetamine fluctuate and vary by area. Prices are typically much cheaper along the

border than in other areas of Mexico, ranging between \$20 and \$60 per tablet in border areas (see exhibit 5).

**Exhibit 5. Prices<sup>1</sup> for Methamphetamine Tablets in Mexico, by Area**



<sup>1</sup>Prices shown in Mexican pesos.

SOURCE: SISVEA-PGR

Methamphetamine is smuggled from area to area in a variety of ways, including the following:

- In hidden compartments in vehicles
- In containers with food labels
- In plastic bags and cardboard boxes
- In clothes and footwear

**Methamphetamine Use Patterns and Consequences**

Methamphetamine is used in many places, especially in settings in the outskirts of cities. It is used, for example, in vehicles, hotels, abandoned homes, bars, discothèques, and parties. These parties last 2–3 days in some States (e.g., Michoacan). Methamphetamine is readily found in factories and in schools.

Typically, methamphetamine is used orally, but it is also inhaled, smoked, or injected. In the northern part of the country, however, inhalation and smoking are the preferred routes.

Methamphetamine is often used in combination with heroin (placed in containers and heated). Some users place methamphetamine in the lower part of a broken lightbulb, mix it with acetone or baking soda/powder, and smoke it.

Patients in treatment centers say that frequent use of methamphetamine leads to paranoia, depression, hallucinations, aggressiveness, violent behaviors, and robbery—outcomes that have been recorded in the literature. In Mexican treatment centers, intervention

options include occupational therapy, psychotherapy, and group therapy. A major problem is that these patients often do not want the treatment or abandon it. The psychiatric conditions typical of such patients include diminished appetite, irritability, confusion, anxiety, hostility, and aggression, among others.

The questionnaires used by treatment centers began to include methamphetamine in 1996. Since that time, there have been substantial increases, nationally, in the percentages of patients reporting use of methamphetamine and those identifying it as their drug of impact. From 1996 to the first half of 2004, reports of methamphetamine as the current drug of impact rose from 3.1 to 17.4 percent, and use among patients increased from 7.1 to 25.1 percent. Problems associated with methamphetamine are greatest in the northern States of Mexico, more so, in fact, than problems related to other drugs. It has had much less of an impact in the south.

**Identifying Methamphetamine in Data Collection Efforts**

Qualitative and quantitative data, collected in the 53 cities that participate in SISVEA, include among the questions pursued: “How do you identify methamphetamine users? How do you determine if methamphetamine is the drug being used?” Among the responses received has been a long list of names identified by patients in treatment centers for methamphetamine. These are shown in exhibit 6.

**Exhibit 6. Names for Methamphetamine**

Tacha	Pasadin	Crank	Cricri	Speed
Pasta	Eva	Pase	Fatche	Metas
Extasis	XCT	Ice	Blancas	Humo
Cristal	Glass	Guacheche	Arranque	Macaneo
Hielo	Met	Macanquin	Vidrio	

SOURCE: SISVEA—Treatment patients

The many names by which methamphetamine is known reflects one of the problems SISVEA has in determining the best way to refer to and distinguish methamphetamine in the instruments used to collect data from patients. It has also been difficult to distinguish methamphetamine from other drugs, especially amphetamines, which have similar chemical properties and actions.

Also, in Mexico, methamphetamine is obtained from many different sources and in a variety of places, including drug dealers/pushers, stores, and homes. How to gather valid data specific to the sources/places from which the drug is obtained is another problem confronted in data collection. Methamphetamine users are particularly reluctant to report that they obtained the drug from friends.

# Findings from Mexico's National Surveys—Focus on Methamphetamine Use and Abuse in Border Areas

Jorge A. Villatoro Velazquez, M.C., Ma. Elena Medina-Mora Icaza, and Clara Fleiz Bautista

Surveys of patients in government treatment centers (GTCs), school students (grades 7–12), and the national household population show the following:

- Methamphetamine ranks approximately fifth among illicit drug use/abuse in Mexico.
- Methamphetamine use/abuse is much higher in northern border areas, particularly those near the Pacific Coast.
- Methamphetamine use/abuse is higher among males than females.
- Methamphetamine use among students stabilized from 2000 to 2003.

## Overview

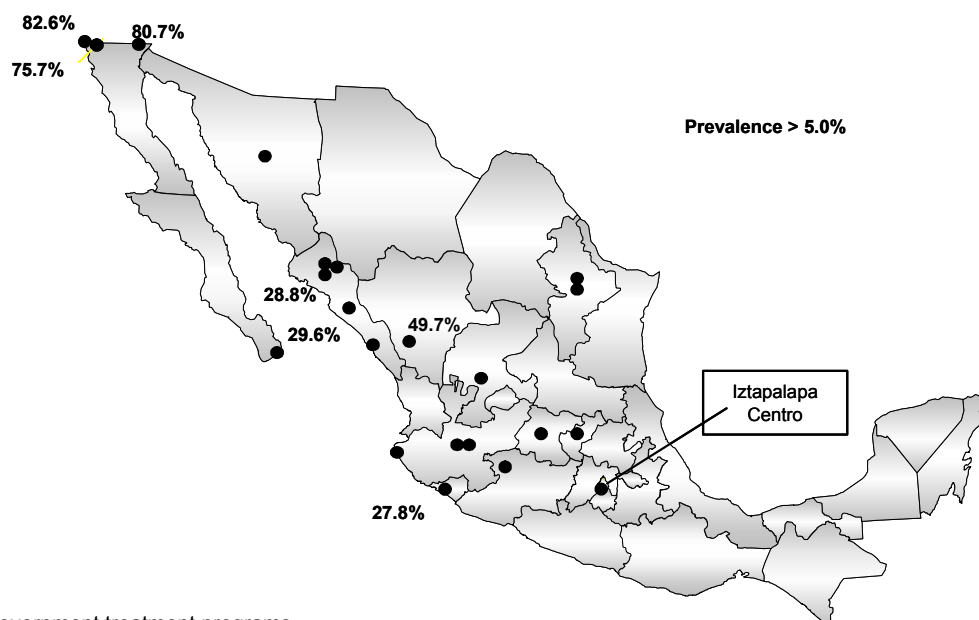
Drug use and abuse in Mexico has remained relatively stable over the past 4 years. Marijuana and

cocaine continue to be the most commonly used drugs, but indicator data reflect an increase in the use of methamphetamine. This paper focuses on methamphetamine use, and it is based primarily on data from the national household surveys (administered periodically in Mexico), surveys of school students in different regions of the country, and surveys of patients in government treatment centers.

## GTC Surveys

In 2001, three-quarters or more of patients in programs near the Pacific Coast had ever used (“lifetime”) methamphetamine, compared with between approximately 28 and 30 percent of patients in programs along the central and more southern Pacific Coast areas (*see exhibit 1*). The combined proportion of patients in the northern region who reported lifetime use of methamphetamine was only 41.6 percent in 1995, an indication of the rise in use of this drug in the northern region in recent years.

Exhibit 1. Lifetime Use of Methamphetamine Among GTC Patients in Selected Areas in Mexico: 2001



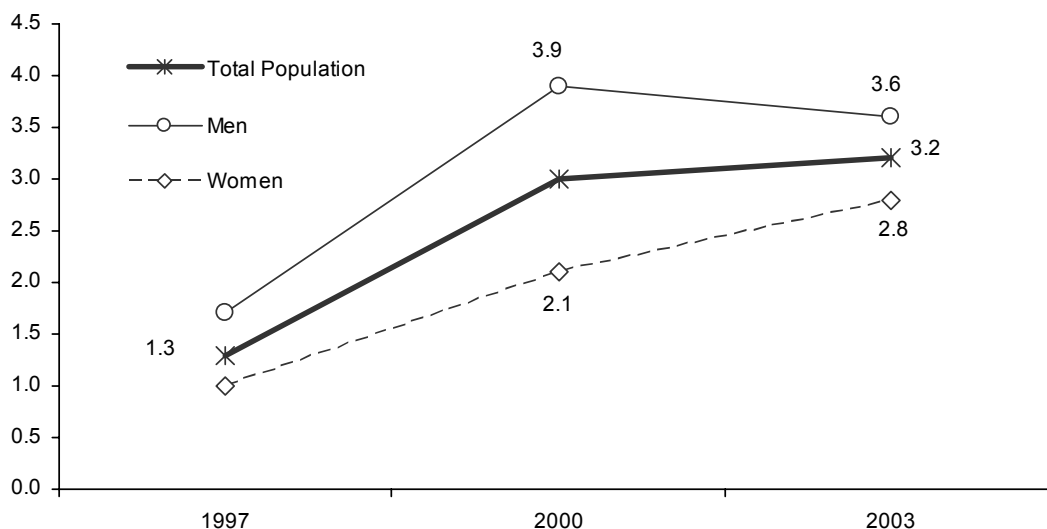
SOURCE: Government treatment programs

### School Survey Data

School survey data for the Federal District (Mexico City area) show that, in 2003, 3.2 percent of the students in grades 7–12 had used methamphetamine in their lifetime, with the proportion being higher for

males (3.6 percent) than females (2.8 percent). As can be seen in exhibit 2, the use of methamphetamine among students in the Mexico City area rose substantially from 1997 to 2000 and began to stabilize by 2003.

**Exhibit 2. Trends in the Lifetime Use of Methamphetamine Among 7th to 12th Grade Students in the Mexico City Area, by Gender and Percent: 1997, 2000, 2003**



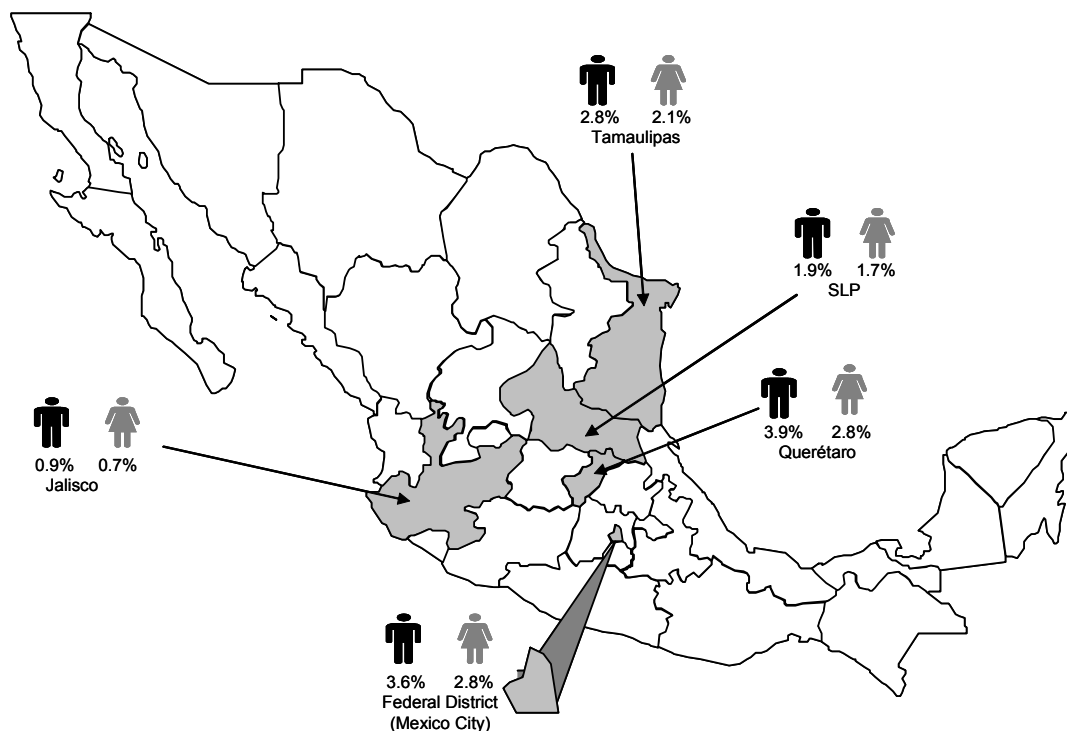
SOURCE: Villatoro and colleagues

Trends of past-year use of methamphetamine among students in the Mexico City area are similar to those shown in exhibit 2 for lifetime use, with use peaking in 2000 and stabilizing by 2003. By 2003, 0.8 percent of the students reported using methamphetamine in the past year, with more males (0.7 percent) than females (0.3 percent) reporting past-year use. However, there was a slight rise in past-month use among males from 2000 to 2003 (0.6 to 0.7 percent) but a drop in past-month use among females (0.5 to 0.3 percent), with the overall proportion remaining unchanged at 0.5 percent in both 2000 and 2003. However, the total prevalence of past-month metham-

phetamine use among this student population was so low in 1997—0.1 percent—that no gender differences were calculated.

Over the past 6 years, various parts of the country (see exhibit 3) incorporated questions on methamphetamine use in the student survey questionnaires. The survey data indicate that while methamphetamine use remains low in Tamaulipas, Rioverde, and Ciudad Guzmán, use of the drug is much more prevalent in Central Mexico, specifically Querétaro and Mexico City.

**Exhibit 3. Percentages of Students in Grades 7–12 Who Ever Used Methamphetamine in Selected Areas: 2003**



SOURCES: Gayther et al. (2004); Villatoro, Martínez et al. (2004), Villatoro, Medina-Mora et al. (2004); Villaruel et al. (2004); Amador et al. (2003)

### National Household Survey Data

The 2002 national household survey data show that 0.1 percent of the population had ever used amphetamines (including methamphetamine); the proportion was higher in the northern region, at 0.4 percent. By gender, 0.2 percent of males and 0.05 percent of females had ever used amphetamines. In the northern region, 0.6 percent of the males and 0.1 percent of the females had used amphetamines during their lifetime.

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# Methamphetamine Abuse Among Adult Male Arrestees in the U.S. ADAM Program in 2000–2003

Sandra Woerle

**Major findings on methamphetamine use among adult males in the Arrestee Drug Abuse Monitoring (ADAM) program from 2000 to 2003 are as follows:**

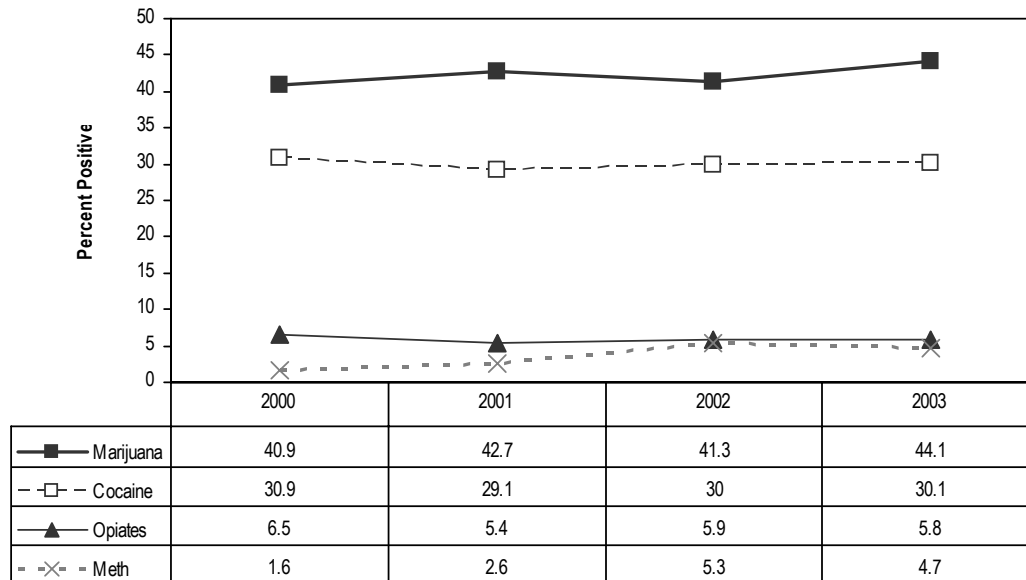
- The percentages of adult male arrestees testing methamphetamine positive across ADAM sites increased from 2000 to 2002, and they remained relatively high in 2003; in ADAM sites near the U.S.-Mexico border, the percentages testing positive more than doubled from 2000 to 2003.
- The percentages of adult male arrestees who reported acquiring methamphetamine in the 30 days prior to arrest also increased; this finding also characterized arrestees in ADAM sites near the U.S.-Mexico border.

In reviewing the findings from the National Institute of Justice ADAM program, it should be noted that the lower percentages reported below for 2003 are likely an artifact of sampling. In 2003, new sites sampled increased coverage in eastern areas of the United States where methamphetamine abuse indicators tend to be low.

Exhibit 1 shows that, of the adult male arrestees who were tested by urinalysis for the presence of drugs...

- Only 1.6 percent tested methamphetamine positive in 2000.
- The proportions increased to 2.6 percent in 2001 and to 5.3 percent in 2002.
- In 2003, 4.7 percent tested methamphetamine positive.

**Exhibit 1. Median Percentages of Adult Male Arrestees Testing Positive, by Drug and Year: 2000–2003**



SOURCE: ADAM, NIJ

Exhibit 2 on the following page depicts the percentages of male arrestees testing methamphetamine positive in each ADAM site for the years 2000–2003. Clearly, the percentages were higher in western

and most southwestern areas than in midwestern and eastern areas. Typically, the percentages with methamphetamine-positive tests increased in western and southwestern areas, as well as in the midwestern areas.



When asked by ADAM interviewers if they had acquired specific drugs in the past 30 days, large percentages of male arrestees in 2000–2003 admittedly acquired marijuana shortly before being arrested (*see exhibit 3*). While much smaller proportions reported acquiring methamphetamine in

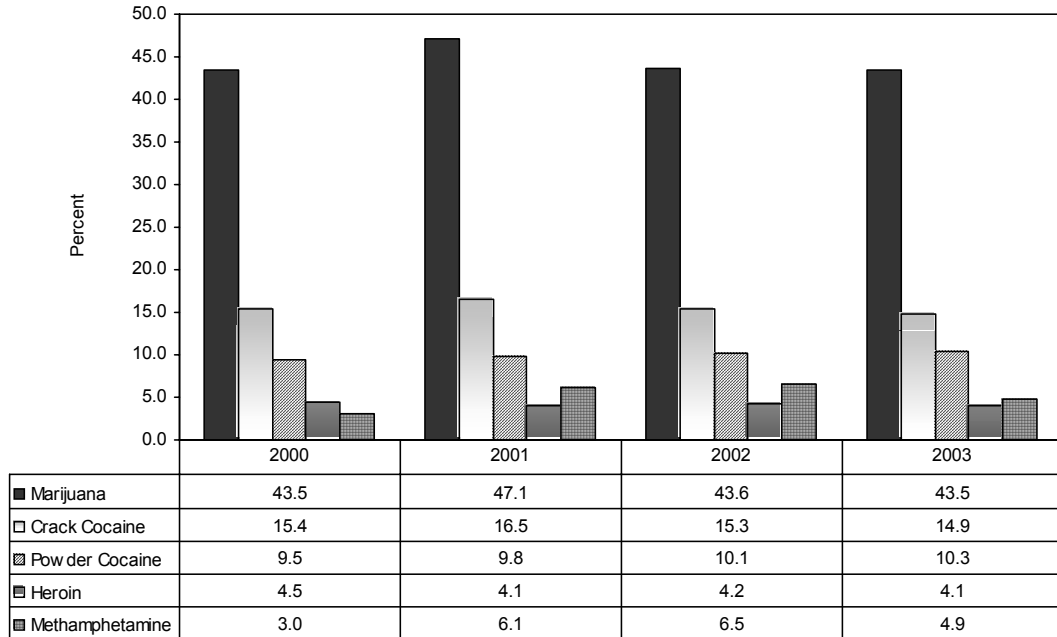
the past 30 days, the percentage more than doubled from 2000 to 2002 (from 3.0 to 6.5 percent). In 2003, 4.9 percent of the male arrestees said they had acquired methamphetamine in the 30 days prior to arrest.

**Exhibit 2. Percentages of Adult Male Arrestees Testing Methamphetamine-Positive, in Selected ADAM Sites: 2000–2003 (Shown in Descending Order by 2003 Percent)**

ADAM Site	2000	2001	2002	2003
Honolulu, HI	35.9	37.4	44.8	40.3
Phoenix, AZ	19.1	25.3	30.9	38.3
Sacramento, CA	29.3	29.3	33.5	37.6
San Jose, CA	21.5	30.2	29.9	36.9
San Diego, CA	26.3	27.9	31.7	36.2
Spokane, WA	20.4	19.5	22.3	32.1
Los Angeles, CA	N/A <sup>1</sup>	N/A	14.8	28.7
Las Vegas, NV	17.8	20.5	22.9	28.6
Des Moines, IA	18.6	22.0	20.2	27.9
Salt Lake City, UT	17.1	17.2	22.8	25.6
Portland, OR	21.4	20.4	21.9	25.4
Omaha, NE	11.0	15.6	21.0	21.4
Tulsa, OK	N/A	0.0	14.4	17.4
Tucson, AZ	6.9	5.4	9.2	16.0
Woodbury, IA	N/A	N/A	15.3	14.3
Oklahoma City, OK	11.3	10.9	14.3	12.3
Seattle, WA	9.2	11.1	10.9	12.1
Albuquerque, NM	4.7	9.5	6.7	10.1
Dallas, TX	2.1	1.7	3.1	5.8
<b>Median</b>	<b>1.6</b>	<b>2.6</b>	<b>5.3</b>	<b>4.7</b>
Denver, CO	2.6	3.4	3.8	4.7
San Antonio, TX	0.2	2.6	2.3	3.5
Minneapolis, MN	1.6	2.4	3.9	3.3
Espanola, NM	N/A	N/A	0.0	2.8
New Orleans, LA	0.2	0.0	1.3	2.6
Houston, TX	0.5	N/A	N/A	2.1
Atlanta, GA	0.5	N/A	2.3	2.0
Indianapolis, IN	0.7	0.6	1.5	1.9
Chicago, IL	0.0	0.2	0.3	1.4
Birmingham, AL	0.2	0.2	0.6	1.2
Anchorage, AK	0.2	0.8	1.5	0.7
Charlotte, NC	1.4	0.5	0.2	0.6
Cleveland, OH	0.1	0.1	1.5	0.3
New York, NY	0.0	0.1	0.5	0.0

<sup>1</sup>NA=Data not available.  
SOURCE: ADAM, NIJ

**Exhibit 3. Median Percentages of Adult Male Arrestees Who Acquired Drugs in the Past 30 Days, by Drug: 2000–2003**

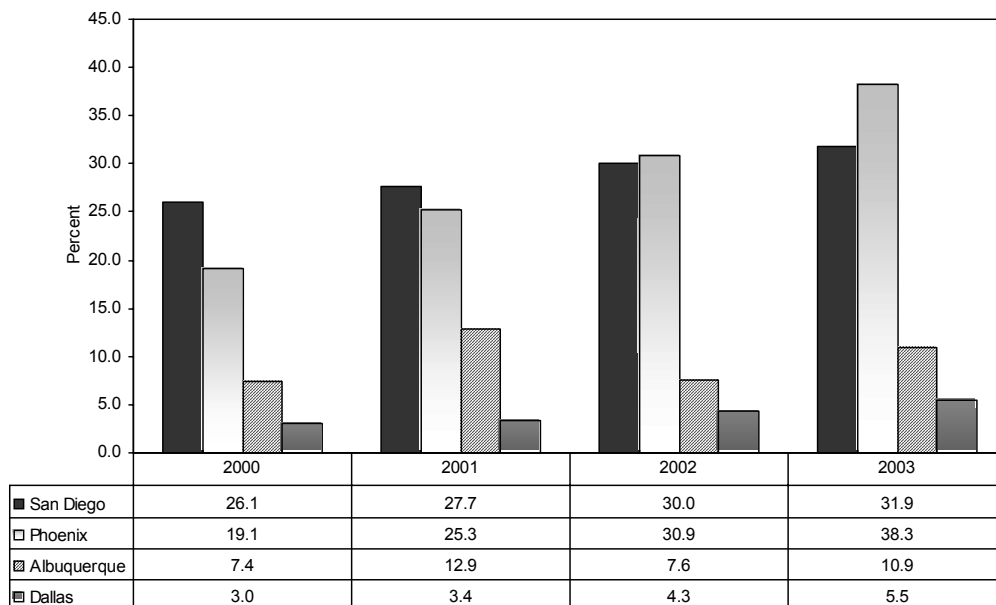


SOURCE: ADAM, NIJ

In each of the 4 years (2000–2003), there were substantial increases in the percentages of male arrestees in States near the U.S.-Mexico border who reported acquiring methamphetamine in the 30 days prior to arrest. These data are shown in exhibit 4 for four cities. In 2003, 38.3 percent of male arrestees in

the Phoenix ADAM program had reportedly acquired methamphetamine in the past 30 days, as had 31.9 percent of the arrestees in San Diego, 10.9 percent of those in Albuquerque, and 5.5 percent of those in Dallas.

**Exhibit 4. Percentages of Adult Male Arrestees Who Acquired Methamphetamine in the Past 30 Days in 4 ADAM Sites: 2000–2003**



SOURCE: ADAM, NIJ

The findings presented here are from the ADAM report in 2003, the last operational year of the program. NIJ is currently coordinating with the Bureau of Justice Statistics and the Office of National

Drug Control Policy in an effort to develop another drug monitoring program. NIJ is also in the process of producing a research report on methamphetamine, which will be available in 2005.

# DEA Methamphetamine Lab/Chemical Threat Update

*Rich Rosky*

**Major findings from the Drug Enforcement Administration's 2004 update on the methamphetamine threat along the U.S.-Mexico border include the following:**

- **Methamphetamine is a significant threat to States located on the border.**
- **In the past year, large quantities of methamphetamine and the chemicals used to produce this drug were smuggled across the border from Mexico to California and Arizona; some was transported on to New Mexico and Texas, where small methamphetamine clandestine labs were proliferating.**
- **Increasingly, "ice" (the purer form) was the type of methamphetamine destined for the United States.**

Data from the four U.S. border States are summarized below.

## California

- Large quantities of the ice form of methamphetamine were smuggled into California from Mexico.
- Large Mexican national labs (producing 10 to 25 pounds of methamphetamine per cook) were located in rural northern California.
- The number of super labs in California declined, while methamphetamine production increased in areas south of the California border.
- The number of labs increased in Baja California, Mexicali, and Tijuana. In 2003, 47 methamphetamine lab seizures were reported in Baja.
- Approximately 90 percent of the methamphetamine precursor chemical seizures were made at the California Ports of Entry.

## Arizona

- Increasingly, large amounts of methamphetamine were smuggled through the Arizona Ports of Entry in 2004.

- Arizona was the major transshipment point for Mexican methamphetamine to other parts of the United States; Phoenix and Tucson were major drug corridors.
- Methamphetamine abuse increased throughout the State. Methamphetamine use more than doubled in the past 5 years.
- About 25 percent of the arrestees booked in Maricopa County jails tested positive for methamphetamine in 2003.
- Increasing numbers of job applicants tested positive (in pre-employment screens) for methamphetamine.
- Increases in violent crimes, child abuse cases, identity theft, robbery, and burglary were associated with increases in methamphetamine production and abuse.

## New Mexico

- Methamphetamine availability and abuse increased throughout the State.
- High-purity methamphetamine was transported into the State from Mexico or through Arizona and California.
- Small methamphetamine labs continued to proliferate in the State.
- An increase in the anhydrous ammonia methamphetamine production method was attributed to Texas methamphetamine "cooks."
- Mexican nationals controlled the methamphetamine distribution network.
- Albuquerque was a major point of methamphetamine distribution.

## Texas

- Law enforcement agencies throughout the State reported that methamphetamine abuse indicators were high in Texas.
- Domestic methamphetamine production increased.

- Both the anhydrous ammonia and red P methamphetamine production methods were commonly used to produce methamphetamine in the State.
- Increasing numbers of methamphetamine abusers entered treatment in the State.
- Seizure data indicate that Texas has become a key entry point for Mexican-produced methamphetamine. In 2002, Texas ranked second in the quantity of methamphetamine seized in the United States.
- It was reported that large quantities of methamphetamine are available in Houston.
- High-purity crystal methamphetamine (ice) became increasingly available throughout the northern and eastern areas of Texas.

#### **Southwest U.S. Border Seizure and Manufacturing Data**

Of the 4,737 methamphetamine laboratories seized in the United States from January 1 to August 19, 2004,

305 were seized in California, followed by 219 in Texas, 55 in New Mexico, and 45 in Arizona. The quantities of the methamphetamine seized from January 1 through August 11, 2004, also varied by area: 589.2 kilograms in Arizona, 457.4 in Texas, 266.9 in California, and 14.9 in New Mexico.

The pseudoephedrine/red phosphorous/iodine reduction method was the most popular way of manufacturing methamphetamine in the southwestern United States. Red phosphorus was obtained illegally from Mexico and Canada or diverted from businesses in the United States. Iodine continued to be smuggled in from Mexico.

#### **Child Endangerment**

Children are endangered by methamphetamine laboratories in a variety of ways, including exposure (e.g., to chemicals that are airborne or found in food and ingested) and injuries or death from lab burnings or explosions. From January 1 to August 16, 2004, 1,410 children in the United States were reportedly adversely affected by methamphetamine labs. Of these, 125 were in California, 97 were in Arizona, 58 were in Texas, and 9 were in New Mexico.

# The Demand Reduction Policy of Mexico

*Cristóbal Ruiz Gaytán López, M.D.,M.P.H.*

Mexico’s demand reduction policy is based on a drug abuse profile of the national population, the northern border area, and Mexico City. The data are used to develop successful interventions, assess intervention models, and monitor drug abuse patterns in the population. Some examples of the data used, and recent findings, are summarized below:

- According to the 2002 national household survey...
  - Five percent of the population had ever used illicit drugs—8.6 percent of males and 2.1 percent of females
  - Marijuana was the most prevalent drug “ever used” (3.5 percent), followed by cocaine/crack (1.2 percent); 0.8 percent reported lifetime use of amphetamine-type drugs.
- Data from government treatment centers (GTCs) and nongovernment treatment centers (NGCs) by the Epidemiologic Surveillance System of Addictions (SISVEA) in 2001 show that methamphetamine as a drug of impact (main drug of use) accounted for the largest proportion of GTC patients in Mexicali (65.1 percent) and Tijuana (63.3 percent), as well as NGC patients in Tijuana (43.5 percent). In other border areas, heroin, cocaine, and/or marijuana were the major illicit drugs of impact.

### National Household Survey Findings—2002

As shown in exhibit 1, marijuana was the most prevalent drug of use “ever,” in the past year, and in the past month, followed by cocaine/crack.

**Exhibit 1. Prevalence of Drug Use in the Mexican Population, by Drug and Percent: 2002**

Drug	Ever Used	Used Past Year	Used Past Month
Marijuana	3.48	0.60	0.31
Inhalants	0.45	0.08	0.08
Hallucinogens	0.25	0.01	0.01
Cocaine/Crack	1.23	0.35	0.19
Heroin	0.09	0.01	–
Amphetamines	0.08	0.04	0.01

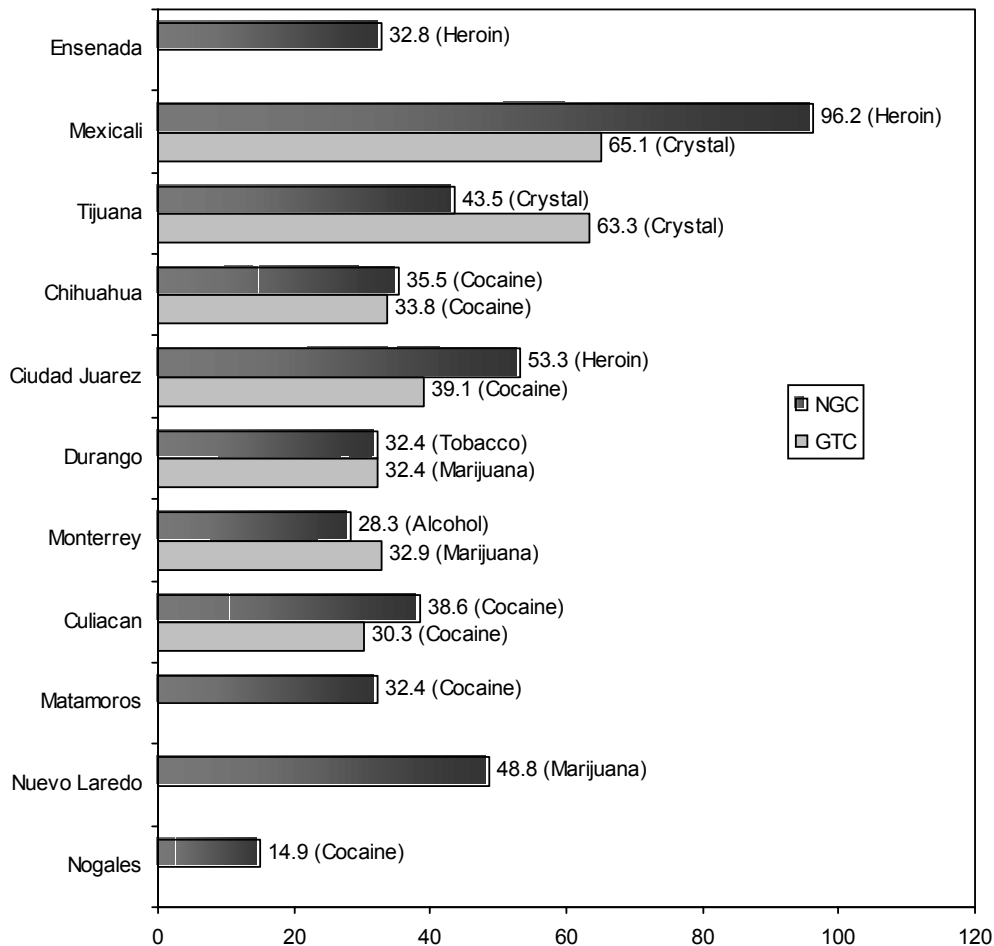
SOURCE: National Household Survey 2002, SSA, INPRFM, DGE, INEGI

Overall, slightly more than 5.0 percent of the population had ever used an illicit drug, with the prevalence being far higher among males (8.6 percent) than females (2.1 percent). Of those who had used amphetamines, 20.6 percent had only used them once or twice in their lifetime. Nearly 45 percent had used amphetamines 11–50 or more times during their lifetime.

### Treatment Data—2001

As shown in exhibit 2, methamphetamine (crystal) was the most frequently reported drug of impact among GTC patients in Mexicali and Tijuana, and among NGC patients in Tijuana, in 2001. Cocaine and heroin were major drugs of impact among most of the other treatment groups, with marijuana accounting for considerable proportions in the eastern areas of Monterrey and Nuevo Laredo.

**Exhibit 2. Major Drugs of Impact Among Patients in Border Area GTCs and NGCs, by City and Percent: 2001**



SOURCE: SISVEA—Government and nongovernment treatment centers

Across the border regions in government treatment centers, methamphetamine as a drug of impact increased dramatically from 1994 (1.3 percent) to 2001 (15.2 percent). In contrast, over the same time period, the proportions of GTC patients in Mexico City reporting methamphetamine as the drug of impact increased from 0.1 to 2.2 percent, a further indicator of the high levels of methamphetamine abuse along the Mexico-U.S. border.

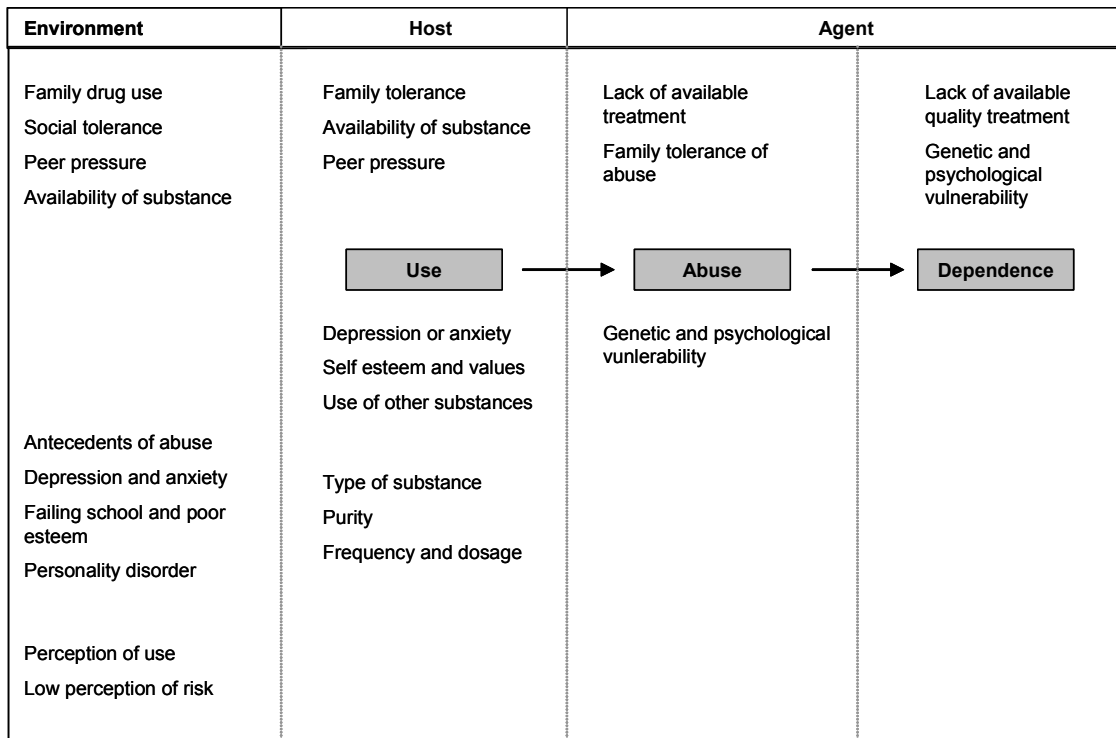
**Policy Issues**

The information collected through national surveys and other agencies that report data to SISVEA pro-

vide the knowledge base for developing successful substance abuse interventions, assessing the intervention models, and continuing efforts to monitor the problem.

Factors related to drug use, and abuse of and dependence on substances, are identified and considered in planning interventions. Opportunities for intervention can be found in the environment, in the genetic and psychological makeup of individuals, in knowledge of substances used and use behaviors, and in availability of treatment. Such factors are identified in exhibit 3 below and related to substance use, abuse, and dependence.

**Exhibit 3. Opportunities for Intervention**



SOURCE: National Council on Addictions

The logic of program intervention lies in the following:

- Tobacco is typically the first drug of use; the average age of first tobacco use is 13.
- Those who smoke tobacco and use alcohol at an early age are 12 times more at risk for using other drugs.

- A “political fort” has been established to diminish the use of tobacco among adolescents, which, as a consequence, will lead to the avoidance of other drug use.



# Methamphetamine Abuse in San Diego County, California

Michael Ann Haight, M.A.

**San Diego continues to be one of the epicenters for methamphetamine abuse in the United States. While abuse indicators are mixed, they clearly show that methamphetamine is a major problem in the county:**

- **Forty-two percent of all treatment admissions in 2003 were for primary methamphetamine abuse, up from 39 percent in 2002.**
- **Thirty-six percent of adult male arrestees tested in the Arrestee Drug Abuse Monitoring (ADAM) program in 2003 tested methamphetamine positive, up from 32 percent in 2002; increases were also reported for adult female arrestees and juveniles.**
- **Methamphetamine overdose deaths declined from 61 in 2001 to 48 in 2003, and the number of methamphetamine emergency department mentions decreased from 673 in 2001 to 598 in 2002.**
- **Methamphetamine abuse has been increasing in the Hispanic population.**
- **Male methamphetamine treatment admissions have increased with the passage of Proposition 36, which mandates treatment for persons arrested on drug charges.**

## Background

There are several geographic and social factors that foster the manufacture, trafficking, and abuse of methamphetamine in San Diego County. Geographically, the county is isolated from the rest of California. There are 80 miles of border to the south, 70 miles of ocean to the west, mountain ranges to the east and northeast, and a military base to the north. There are three border crossings including the Tijuana crossing, which is one of the busiest in the world. The border and the coastline represent a particular challenge in attempting to control the import of methamphetamine. In addition, isolated rural areas are ideal for the establishment of small methamphetamine clandestine labs.

Prior to 1989, there were many small methamphetamine labs in San Diego, operated by local “cookers” and outlaw motorcycle clubs. Over the years, however, the production and abuse of methamphetamine

“waxed and waned.” The Chemical Diversion and Trafficking Act of 1988 and the Chemical Control Diversion Act of 1993 helped to curtail access to the precursors used to make methamphetamine. In addition, a Drug Enforcement Administration (DEA) sting effort, Operation Triple Neck, resulted in arrests and the closing of stores that supplied equipment and chemicals to the methamphetamine cookers. Most methamphetamine indicators declined for a time, but new sources and distribution networks emerged so that...

- Mexican nationals and Mexican-Americans, operating on both sides of the border, began to produce large quantities of high-purity methamphetamine.
- The already established networks used to distribute other illicit drugs were used to distribute methamphetamine.
- The profits from these operations were large.

## Findings from Other Indicator Data

Other indicator data in San Diego County show the following patterns and trends in methamphetamine abuse:

- Methamphetamine overdose deaths peaked in 1997 (62), decreased in 1999 (37), increased again in 2001 (61), and declined in 2003 (48).
- Methamphetamine ED mentions peaked in 1997 (976) and decreased in 2002 (598), although the decrease was not statistically significant.
- Methamphetamine treatment admissions ( $n=6,973$ ) and total treatment admissions (18,009) peaked in San Diego in 2002, and the proportion of methamphetamine admissions increased from 39 to 42 percent from 2002 to 2003.
- Methamphetamine-positive toxicology tests among adult male arrestees increased from 32 to 36 percent from 2002 to 2003; methamphetamine-positive tests among adult female arrestees increased from 37 to 47 percent over the same time period, while those among juvenile arrestees increased from 9 to 15 percent.

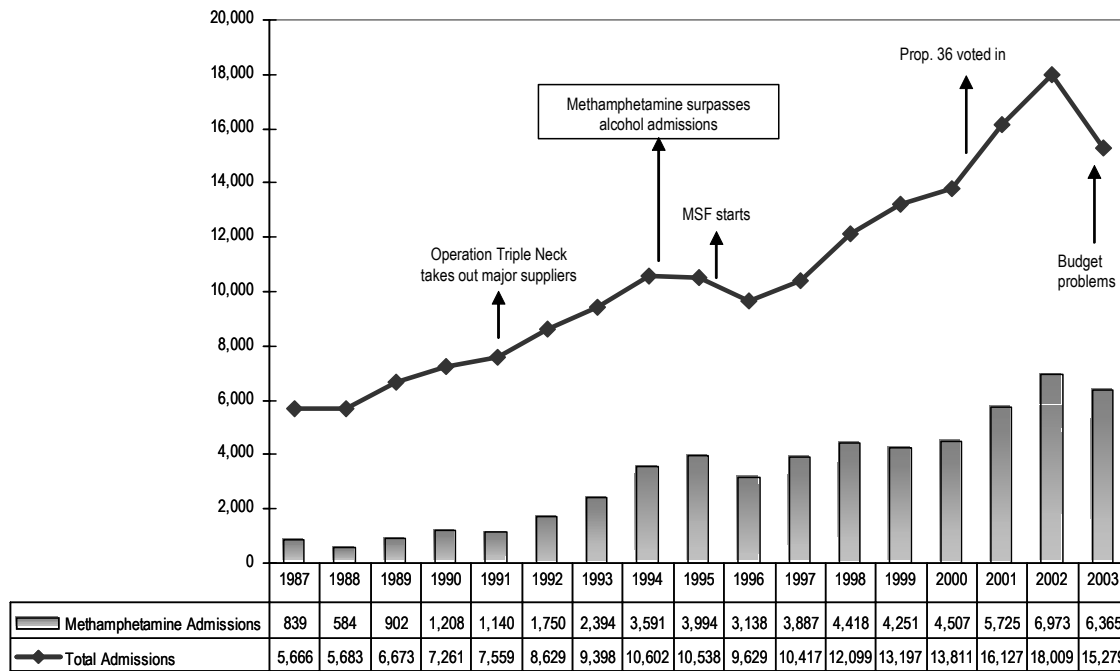
Over the years, a number of factors were associated with increases in total admissions and those for methamphetamine, including the following:

- Law enforcement actions in the late 1980s and early 1990s, such as Operation Triple Neck
- The establishment of the Methamphetamine Strike Force (MSF)
- The establishment of and increase in the number of drug courts

- The passage of Proposition 36 in 2000, which mandated treatment of drug users involved in the criminal justice system

Some of these external factors are graphically depicted in exhibit 1, together with treatment admissions data. Note that “budget problems” in the State correspond to decreases in total admissions, including primary methamphetamine admissions in 2003.

**Exhibit 1. Changes in Treatment Admissions in Relation to Law Enforcement and Other Societal Changes: 1987–2003**



SOURCES: San Diego County Alcohol and Drug Data System and other archival data

In 2003, 72.3 percent of the 6,365 primary methamphetamine abuse treatment admissions in San Diego County were referred by the criminal justice system, compared with only 14 percent in 1987. Over the years, the following major changes have occurred in the demographic composition of methamphetamine treatment admissions:

- The proportion of male admissions increased, reaching 58 percent in 2003.
- The median age of methamphetamine admissions increased, reaching 33 in 2003.
- The percentage of Hispanic methamphetamine admissions increased from 12 percent in 1991 to 28 percent in 2003. At the same time, White ad-

missions decreased from 79 percent in 1991 to 55 percent in 2003.

Over many years, San Diego County has had considerable experience in assessing and addressing problems associated with methamphetamine production and abuse. One of the first questions that had to be addressed was “What are we going to do about the problem?” In response, the County Board of Supervisors established the Methamphetamine Strike Force in March 1996, a collaborative “assessment and action” effort involving more than 60 members. The MSF makes use of 10 data sources to guide the Force in assessing the problem at the community level, determining what actions to take, and evaluating results. It was recognized from the beginning that addressing the problems associated with methampheta-

mine required a long-term commitment; thus, attention was focused on many different aspects of the problem, including the following:

- Developing effective plans and policies
- Controlling the availability of precursor chemicals
- Taking steps to protect endangered children

- Making effective use of the media
- Developing and making use of training at all levels

The two newest initiatives include a focus on women and the border.

The Strike Force Web site is: <[www.no2meth.org](http://www.no2meth.org)>.

# Methamphetamine Use in Imperial County, California

John C. Grass, M.A., M.F.T.

**Methamphetamine abuse and trafficking are at high levels in Imperial County and show signs of increasing. Major indicators show the following:**

- **The number of large-scale methamphetamine laboratories has increased, as has the number of pounds of the drug that have been seized in the past year.**
- **Treatment admissions for the primary abuse of methamphetamine accounted for the largest proportion (29 percent) of admissions in fiscal year 2003–2004, increasing once again after peaking in 2001. The increase in primary methamphetamine admissions was particularly notable among females (from approximately 31 percent in 2002 to nearly 40 percent in 2004).**

Some demographic information on Imperial County is shown below, together with some of the factors associated with increases in methamphetamine indicators in the county:

- The county, located on the border, has three Ports of Entry (POEs). More than 35 million people and 250,000 cargo trucks cross the county border each year.
- Of the total population of approximately 156,000, 45,000 live in the largest city—El Centro. The neighboring Mexican city is Mexicali, with a population of more than 1.6 million.
- Imperial County, an arid desert region that covers 4,597 miles, has the highest unemployment rate (21.6 percent in June 2004) and the lowest per capita income (\$22,201 median in 2000) in California.
- The population, which is 72 percent Hispanic, has increased 35 percent since 1990.

## Methamphetamine Trafficking and Price Data

Interdiction data/information, provided by Special Agent Jay Jernegan, DEA, Imperial County, show that...

- The county is an ideal “pass through” for drugs because its POEs and many areas are not covered by Border Patrol.

- Drug and gun trafficking overwhelm seizure capabilities at the POEs.
- The number of large methamphetamine labs in the county has been increasing.
- More small “Nazi Meth” labs have become mobile and, thus, more difficult to find.
- Precursor chemicals are easily obtained in Mexico.
- Methamphetamine is widely available and cheaper than other drugs.
- Methamphetamine production and distribution is a lucrative business. The drug sells for \$3,000 to \$6,000 per pound, depending on its purity.
- Some 38 pounds of methamphetamine were seized in the first 8 months of 2004, compared with 20 pounds in 2003.

Information provided by clients in treatment program included the following:

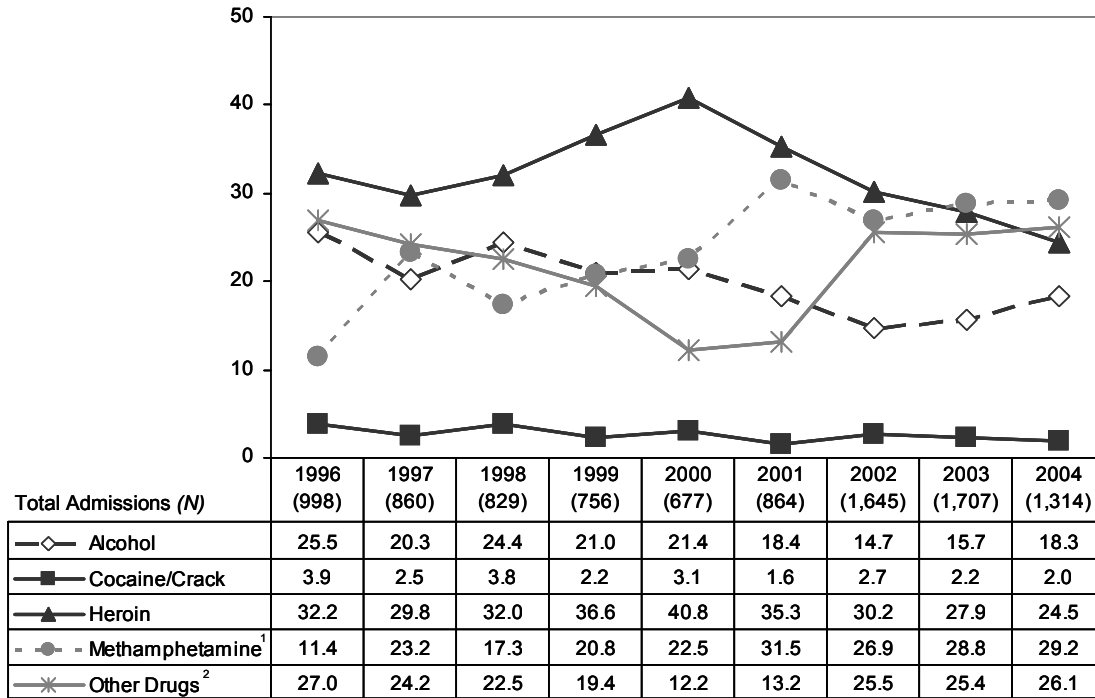
- Street prices of methamphetamine reported by recovering addicts are \$10 for a line (“Dime”), \$25 for 1/32 of an ounce (“1/2 teener”), and \$60 for 1/16th of an ounce (“teener”).

## Treatment Data

Treatment admissions data, as shown in exhibit 1, exemplify the problems of methamphetamine abuse in Imperial County:

- In 2003, methamphetamine surpassed heroin as the primary illicit drug reported by clients admitted to treatment.
- In the first 3 quarters of 2004, 29.2 percent of the treatment admissions reported methamphetamine as their primary drug of abuse, compared with 24.5 percent reporting heroin, 18.3 percent alcohol, 2.0 percent cocaine, and 26.1 percent “other drugs.”

**Exhibit 1. Primary Drugs of Abuse Among Treatment Admissions in Imperial County, California, by Percent: Fiscal Years 1996–Third Quarter 2003–2004**



<sup>1</sup>Includes a few admissions for amphetamines (5 in 2001, 52 in 2003) and other stimulants (1 in 2002).

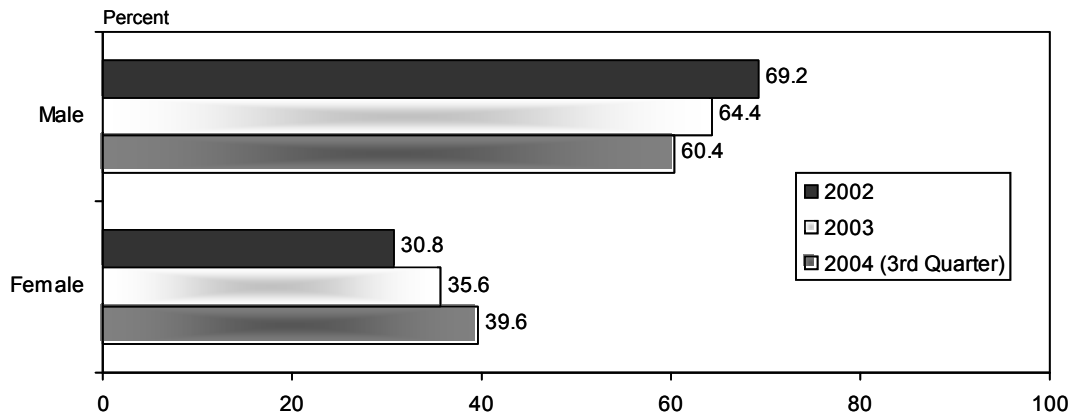
<sup>2</sup>Includes mostly primary marijuana admissions (11.8 percent in 2001, 22.0 percent in 2002, and 21.4 percent in 2003), as well as small percentages for other drugs.

SOURCE: California Alcohol and Drug Data System

The percentage of female admissions reporting methamphetamine as their primary drug of abuse has in-

creased, reaching 39.6 percent of admissions in the first 3 quarters of 2004 (see exhibit 2).

**Exhibit 2. Primary Methamphetamine Admissions<sup>1</sup> in Imperial County, California, by Gender and Percent: Fiscal Years 2002–Third Quarter 2003–2004**



<sup>1</sup>N=492 in 2003–2003 and 384 by the 3rd quarter of 2003–2004.

SOURCE: California Alcohol and Drug Data System

Other treatment data show that...

- Polydrug abuse is common among methamphetamine abusers entering treatment. Methamphetamine users will often use alcohol, marijuana, heroin, or some form of a central nervous system (CNS) depressant with methamphetamine.
- In 2004, nearly three-quarters of primary methamphetamine treatment admissions were Hispanic, a proportion that is representative of the county population.
- Of the methamphetamine treatment admissions in 2004, 13.0 percent were younger than 18, 31.5 percent were age 18–25, 24.5 percent were age 26–35, and nearly 31.0 percent were age 36 or older.
- The statistics surrounding age of admission are of concern, in that the majority of those being admitted between ages of 18 and 35 are experiencing

drug problems during important developmental periods. Developmental impairments affect education, career/trade acquisition, income earning potential, functional family activity, health, and acquisition of assets such as a home, retirement, and other measures of financial security.

In recent interviews, clients in an Imperial County outpatient clinic described the effects of methamphetamine use on their work as follows:

- Initially, methamphetamine use enhanced performance, making it possible to “work harder, faster, and better.”
- However, with continued use of the drug over time, productivity continually declined and eventually robbed “you of everything you thought was so good.”

# Methamphetamine Abuse on the Northern Mexico Border

*Fis. Fernando Galván, M.Sc., M. en C. Mario Cortes, M.Sc., Patricia Cravioto Ph.D., Pablo Kuri M.D., M.Sc., and Roberto Tapia-Conyer, Ph.D.*

Data collected by the Epidemiologic Surveillance System of Addictions (SISVEA) on patients treated in nongovernment treatment centers (NGCs) and arrestees in the care of the Guardian Council of Minors show the following for Mexico overall and the northern border areas:

- Methamphetamine use and abuse among NGC patients increased dramatically from 1994 to the first half of 2004, and it continues to be highest in northern border areas...
  - Methamphetamine as a drug of first use among NGC patients peaked in 2002 at approximately 4.2 percent nationally and 6.4 percent of patients in border programs.
  - As the “drug of impact” (current main drug of use), methamphetamine abuse among NGC patients peaked in 2003, at approximately 17.2 percent nationally and 25.1 percent among border patients.

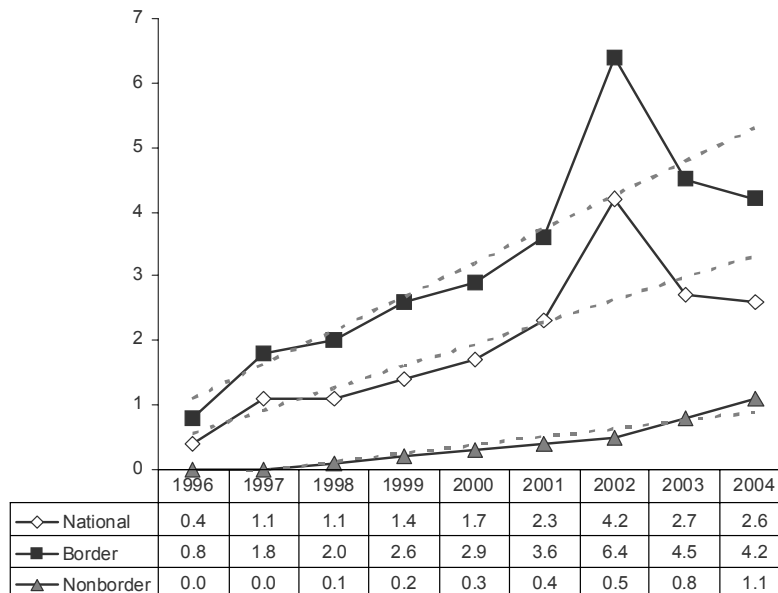
➤ In the first half of 2004, one-half of the 15,880 NGC patients in Mexico were being treated in programs along the northern border; more than two-thirds (34.1 percent) of northern border patients used the drug, and 23.2 percent reported it as their drug of impact.

- Methamphetamine use among young arrestees in the Guardian Council of Minors has also increased, with 9.5 percent of those along the northern border reporting use in the first half of 2004, compared with nearly 5.0 percent nationally.

### Methamphetamine Use Among NGC Patients

From 1996 through the first half of 2004, methamphetamine as a first drug of use was higher among NGC patients in border programs than nationally (*see exhibit 1*). After peaking in 2002, the proportion of patients reporting methamphetamine as the drug of onset decreased in 2003.

**Exhibit 1. Percentages of NGC Patients Reporting Methamphetamine as Their First Drug of Use: 1996–June 2004**

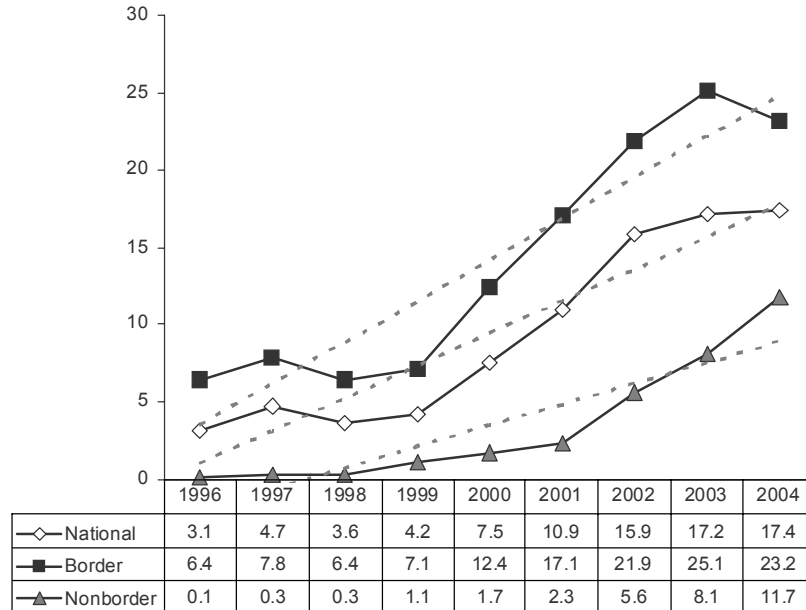


SOURCE: SISVEA—Nongovernment treatment centers

NGC patients in northern border programs were also more likely than patients nationally to cite methamphetamine as their drug of impact—23.2 percent versus approximately 17.4 percent in the first half of

2004 (*see exhibit 2*). The rise in methamphetamine as a drug of impact among NGC patients is particularly striking from 2000 onward.

**Exhibit 2. Percentages of NGC Patients Reporting Methamphetamine as Their Drug of Impact: 1996–June 2004**



SOURCE: SISVEA—Nongovernment treatment programs

Of the 15,880 patients treated in NGCs in the first half of 2004, one-half were treated in northern border programs: 57.0 percent in programs on the western side of the border, 33.7 percent in the central region programs, and 9.3 percent in eastern border programs. More than one-third (34.1 percent) of the 7,940 northern border patients were methamphetamine users or abusers, and, as noted earlier, 23.2 percent cited methamphetamine as the drug of impact.

Among the 2,704 methamphetamine-abusing border patients...

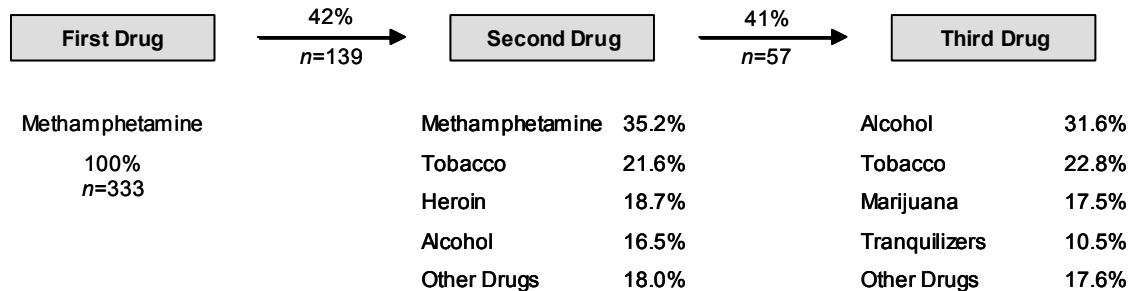
- Slightly more than 12 percent reported methamphetamine as their first drug of use.
- Sixty-eight percent cited methamphetamine as the drug of impact.
- Nearly one-fifth fell into an “other” user category.

Of the 2,704 methamphetamine-abusing patients in the first half of 2004, the majority (92 percent) were male. These male patients were older than their female counterparts: 47.8 percent were age 25 or older, while 47.5 percent of the females were between the ages of 15 and 24. Male patients in this group were less likely than females to be married or living with someone (13.6 vs. 22.0 percent) but were more likely to be unemployed (24.1 vs. 16.7 percent). Nearly 27 percent of the 215 women were housewives.

Natural history data on drug use show that 42 percent of the 333 patients whose first drug of use was methamphetamine used a second drug within 1–2 years, and 41 percent of those who used a second drug progressed to use of a third drug within 1–2 years (*see exhibit 3*). Among this group of 333 patients, methamphetamine was the drug of impact for 79.3 percent; for others, heroin and hallucinogens were the drug of impact (9.6 and 3.9 percent, respectively).



**Exhibit 3. Natural History of Drug Use Among Border Patients<sup>1</sup> Whose First Drug of Use Was Methamphetamine: January–June 2004**



<sup>1</sup>N=333.  
SOURCE: SISVEA—Nongovernment treatment centers

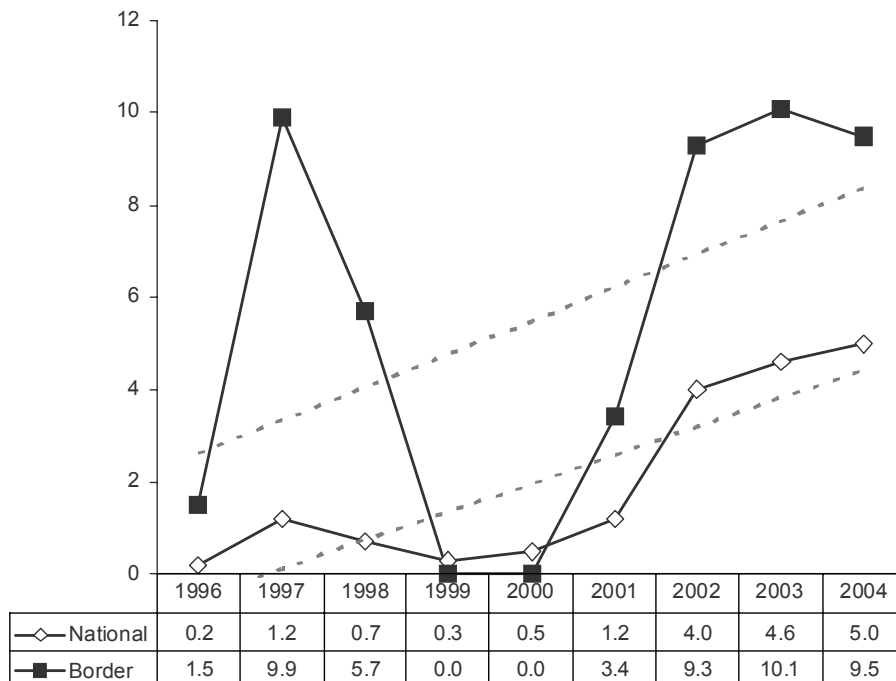
Among the 1,830 NGC border patients in the first half of 2004 who reported methamphetamine as the drug of impact, only 14.4 percent cited it as their drug of onset. Two-thirds of these 1,830 patients had used other drugs, mainly marijuana, alcohol, tobacco, and tranquilizers. Nearly 92 percent of the patients were male. Females in this group were proportionately more likely than their male counterparts to use methamphetamine 2–3 times or more daily (84.2 vs. 79.6 percent) and to smoke the drug (92.0 vs. 80.8 percent). Males were more likely than females to

inhale methamphetamine (15.2 vs. 3.7 percent) and to inject it (2.9 vs. 1.2 percent).

**Methamphetamine Use Among Young Arrestees**

Trend data on juveniles in the care of the Guardian Council of Minors show that methamphetamine use in this population is higher in border areas than in Mexico overall (*see exhibit 4*). In the first half of 2004, 147 juveniles in border programs reported use of methamphetamine, accounting for 9.5 percent of the total juvenile arrestee population there.

**Exhibit 4. Use of Methamphetamine Among Juvenile Arrestees: 1996–June 2004**



SOURCE: SISVEA—Guardian Council of Minors

The percentages of juveniles in border areas that reported use of methamphetamine in the first half of 2004 varied. In western areas, 24.3 percent of those in Tijuana, 15.2 percent of those in Mexicali, and 11.8 percent of those in Ensenada reported use of methamphetamine. In the central border area, 29.7 percent of the juveniles reported use of methamphetamine. In the east, only 0.5 percent of juveniles in Monterrey reported use of methamphetamine.

Of the 147 juveniles in border areas who reported use of methamphetamine in the first half of 2004, 92.5 percent were male. More than 92.0 percent were age 15–18, while 7.5 percent were age 14 or younger. Only 9.0 percent were students, 17.2 percent were employed, and 17.2 percent were subemployed. Robbery was the most common violation (47.6 percent), followed by bearing firearms (16.3 percent). Nearly 7 percent were charged with drug possession/use.

# Methamphetamine Abuse Along the Arizona Border

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

Although sources of data pertaining to drug abuse are limited on the Arizona border, there are indications that methamphetamine abuse has been increasing in border counties and spreading eastward from Yuma County to Cochise County.

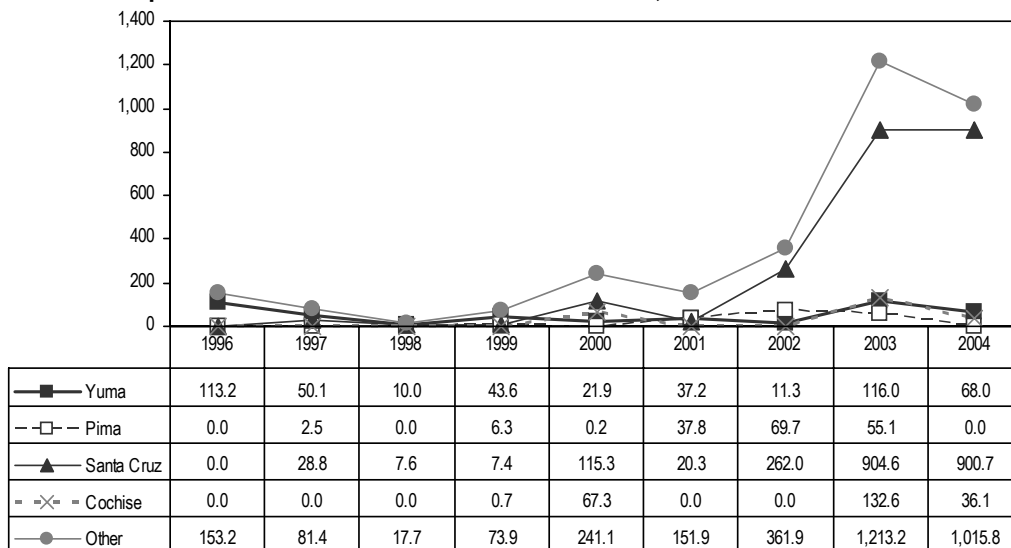
- Seizures of methamphetamine from Mexico increased in recent years, reaching 900 pounds at the Santa Cruz Port of Entry (POE) in 2003 and 2004, but seizures of clandestine laboratories in border counties have decreased.
- Treatment admission rates per 100,000 population for primary methamphetamine abuse increased more than 211 percent from 1999 to 2003, with the increases being highest in Yuma County (375 percent) and (combined) Santa Cruz/Cochise Counties (398 percent).
- Rates of amphetamine-related hospital discharges among adults increased nearly 131 percent from 1995 to 2003, with the greatest increase being in Pima County (170 percent).

- Data from the Uniform Crime Report suggest arrests may have increased for methamphetamine; arrests for methamphetamine involvement are included in the “synthetic narcotic” arrest category, which increased 73 percent from 1995 to 2003.

## Seizure Data

Data from the Drug Enforcement Administration show that methamphetamine laboratory seizures within Arizona decreased from 380 in 1999, to 372 in 2000, to 288 in 2001, to 207 in 2002, to 73 in 2003. However, as shown in exhibit 1, quantities of methamphetamine seized at border POEs and crossings have increased in recent years. More than 900 pounds of methamphetamine from Mexico were seized at the Santa Cruz POE in 2003, and another 900 pounds were seized in the first 7 months of 2004. This compares with less than 10 pounds seized at the Santa Cruz POE in both 1998 and 1999.

**Exhibit 1. Methamphetamine Seizures at Arizona Border Areas, in Pounds: Fiscal Years 1996–2004<sup>1</sup>**



<sup>1</sup>Represents only the first 7 months of 2004.

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

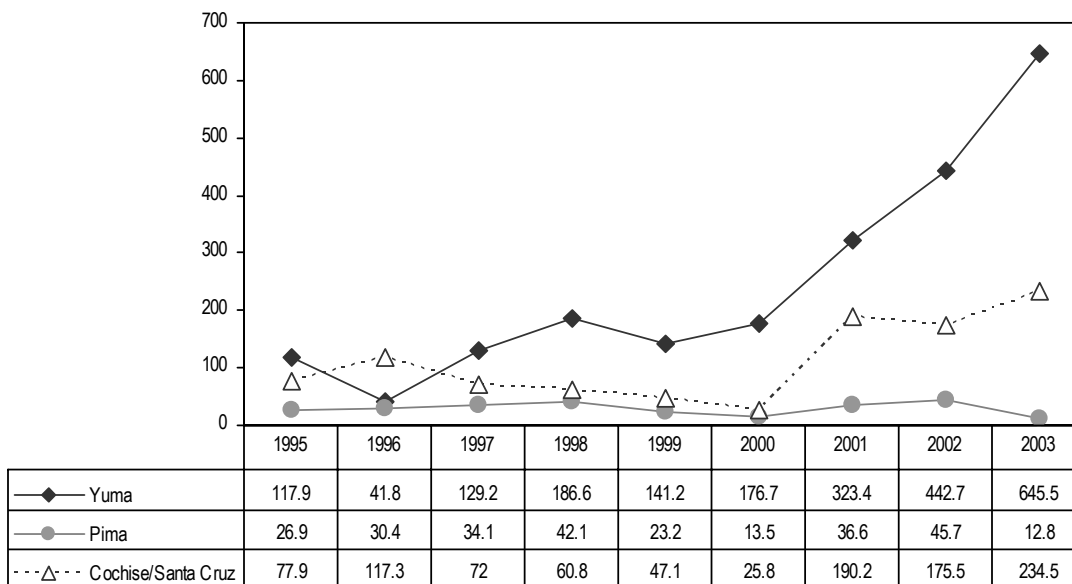
**Drug Treatment Data**

Findings based on a questionnaire that specifically identifies methamphetamine abuse among treatment admissions show the following:

- Treatment admission rates per 100,000 population for primary methamphetamine abuse were highest in Yuma County (see exhibit 2), which borders California on the west. The rate of methamphetamine admissions there increased from 141.16 in 1999 to 645.46 in 2003, a 357-percent increase.

- Methamphetamine admission rates also increased dramatically in the southeastern section of the State in Cochise/Santa Cruz Counties, rising from 47.1 in 1999 to 234.5 in 2003, a 398-percent increase. (Cochise County is located adjacent to New Mexico to the east and Mexico to the south.)
- In Pima County, located between Yuma and Santa Cruz Counties, with Mexico to the south, much lower rates of methamphetamine treatment admissions were reported over the years. In 2003, the rate of methamphetamine admissions was only 12.82.

**Exhibit 2. Rates of Methamphetamine Treatment Admissions Per 100,000 Population in Arizona Border Counties: 1995–2003**



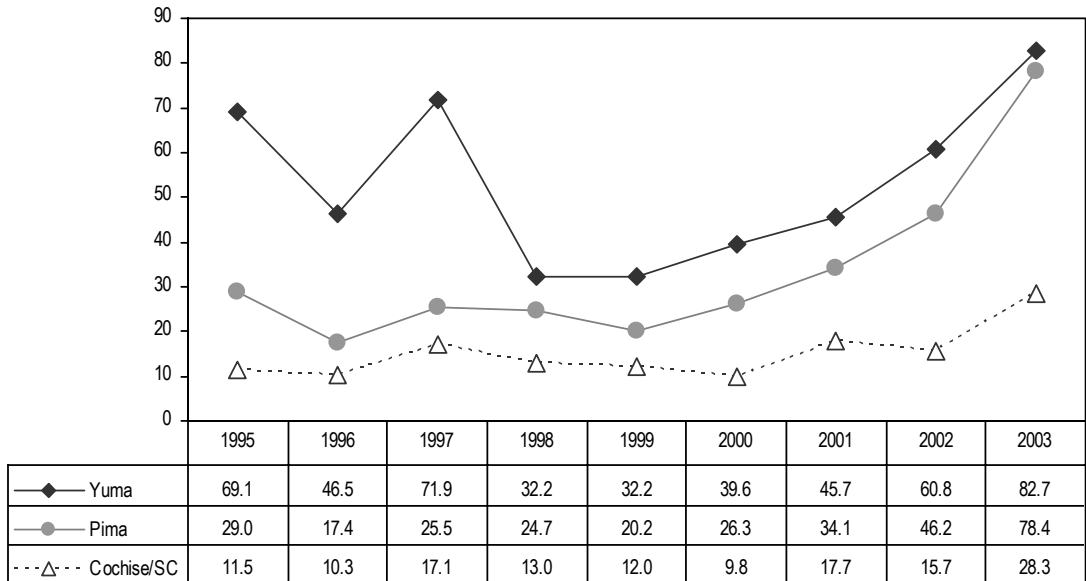
SOURCES: The Excel Group (Yuma County); Arizona Department of Health Services (Pima County); and Southeastern Arizona Behavioral Health Services (Cochise/Santa Cruz Counties)

**Adult Hospital Discharge Data**

Hospital data involving methamphetamine are subsumed under the category of amphetamine-involved 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 methamphetamine discharges. The hospital discharge data show the following:

- Rates of amphetamine-related hospital discharges have increased in all counties located on the Arizona-Mexico border (see exhibit 3).
- In Yuma County, the rate of amphetamine-related hospital discharges increased from 32.18 in 1999 to 82.69 in 2003, a 157-percent increase.
- The rate increased in Pima County from 20.24 in 1999 to 78.38 in 2003, a 287-percent increase.
- In 2003, the rate reached 28.27 in the Cochise/Santa Cruz Counties.

**Exhibit 3. Rates of Adult Amphetamine-Related Hospital Discharges Per 100,000 Population in Arizona Border Counties: 1995–2003**



SOURCE: Arizona Department of Health Services

**Arrest Data**

Uniform Crime Report (UCR) arrest data are very limited because the Federal Bureau of Investigation subsumes methamphetamine under the “synthetic narcotic” category, instead of as a separate drug category. Therefore, it is impossible to determine the extent to which arrests include those for the manufacture/sale or the possession of methamphetamine. The upward trends (increases in rates per 100,000 population) are similar to the trends for methamphetamine seen in the other data sources:

- In Yuma County, rates of arrests involving synthetic narcotics increased from 7.87 in 1997 to 220.71 in 2003.
- In Pima County, the rate increased from 114.67 in 1997 to 193.61 in 2003.
- In Cochise/Santa Cruz Counties, the rate of arrests for synthetic narcotics increased from 6.30 in 1997 to 44.07 in 2003.

# Methamphetamine Use in Southeastern Arizona Counties

Tiara Crouse, M.S.W., L.C.S.W., C.P.H.Q.

**An exploratory study conducted by the author as Research Coordinator for Southeastern Arizona Behavioral Health Services, Incorporated, found the following:**

- **Methamphetamine is used by different population groups for different purposes, for example...**
  - **Women use the drug to lose weight**
  - **Produce workers and truckers use the drug to enhance work performance**
  - **Young workers (e.g., at fast food restaurants) use methamphetamine to enhance performance and also to ease boredom.**
- **Parental use of and addiction to methamphetamine accounted for 85–90 percent of the increase in child protection hearings in the past 2 years.**
- **One-half of the young (age 17–24) jail population were either incarcerated for methamphetamine use or had used the drug prior to incarceration.**

## Background

This exploratory effort, designed research methamphetamine abuse in four sparsely populated southeastern Arizona counties, involved informal interviews with treatment counselors, treatment clients, and agency officials in each of the counties.

The counties differ in many ways, including population size (based on the 2000 census), as shown below:

- Cochise County is the most populated, with 117,000 residents. Within the county, the city of Douglas (14,312 residents) borders Agua Prieta, Sonora, Mexico.
- Santa Cruz County, the smallest of the four counties, had a population of 38,387 in 2000. It includes the city of Nogales, which borders its “sister city,” Nogales, Sonora, Mexico. A major Port of Entry is on the border between the sister cities. The median family income of Santa Cruz residents in 2002 was \$22,306, and nearly 34 percent of the population lived below the poverty line.

- Graham County, a rural area with high desert plains and mountains, had a population of approximately 33,000 in 2000.
- Greenlee County, located east of Phoenix and bordering New Mexico, has the smallest number of residents (8,547 in the 2000 census).

## Findings

The anecdotal information collected in the informal interviews provides some insight into the use of methamphetamine in the four counties, including, as shown below, the types of people who used the drug and some of the reasons for using it:

- In Graham and Greenlee Counties, women (including mothers) used methamphetamine to lose weight.
- In Santa Cruz County, produce workers and truckers with long overtime hours used methamphetamine to enhance work performance. Methamphetamine was reportedly available at truck stops along the I-19 and I-10 corridors.
- In Cochise County, methamphetamine was reported to be readily available and relatively cheap (less expensive than marijuana). The Safeway store in Douglas was identified as a place where the drug was available. In Sierra Vista, young people who work in fast food restaurants use methamphetamine to enhance performance and ease boredom. It was said that “runners” obtain methamphetamine from Tucson and bring it to Benson for distribution. Also, according to informants from the Benson area, the drug is widely available at parties and on the streets of Benson.

Commonalities reported across four counties include the following:

- Child Protection Services (CPS) staff reported that child dependency hearings increased by 60 percent in the past 2 years. According to CPS, 85–90 percent of the increase was because of parents’ methamphetamine use and addiction.
- Approximately 85–90 percent of “severed children” in the CPS system are from methamphetamine-affected families.

- One-half of the jail population between the ages of 17 and 24 were either incarcerated for methamphetamine use or had used methamphetamine prior to incarceration.
- It was reported by clients in drug abuse treatment that powdered phencyclidine (PCP) and methamphetamine are being mixed and snorted. The mixture is called “SNOT.”

# Methamphetamine Abuse on the New Mexico Border

Nina Shah, M.S.

Methamphetamine abuse indicators show that the drug is a growing problem in border areas of New Mexico. Throughout the State, the availability and abuse of methamphetamine are increasing:

- From 1995 to 2003, 19.3 percent of the 1,859 unintentional overdose deaths for all drugs were in the 2 southern regions of the State. In the 2 southern regions, 8.4 percent of the 359 deaths were associated with methamphetamine, a percentage higher than in the 2 northern regions (3.3 percent).
- From 1998 to 2002, the number of methamphetamine hospitalizations (any diagnosis) rose from 361 to 701, an increase of 94 percent. The rate of methamphetamine hospitalizations in border counties increased from 18.60 per 100,000 population in 1998 to 30.86 in 2002, a 66-percent increase.
- The 2003 Youth Risk and Resiliency Survey data showed that 8.2 percent of students in grades 9–12 in New Mexico had used methamphetamine in the past year, with use being significantly higher among Native Americans than among single-ethnicity Whites or single-

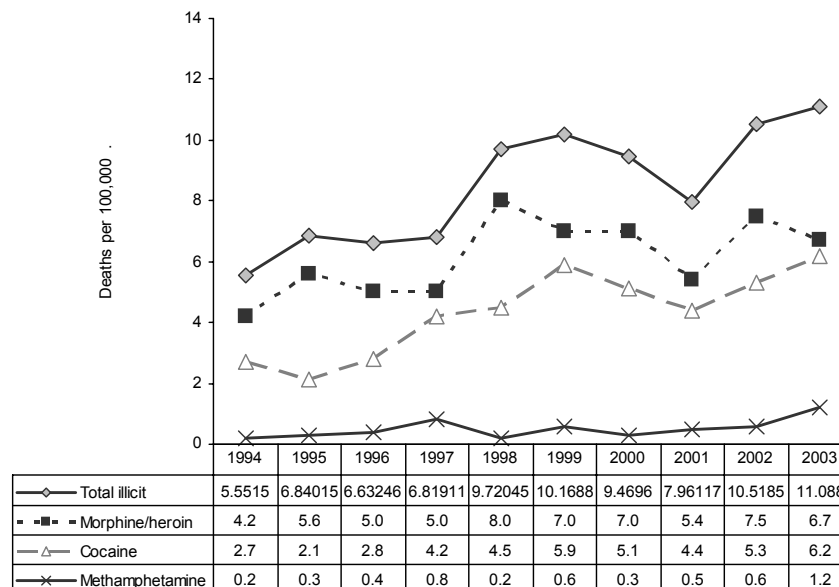
ethnicity Hispanics. In participating counties along the border, between 5.0 and 15.2 percent of the students reported past-year use of methamphetamine.

- Methamphetamine laboratory seizures in New Mexico increased sharply from 47 in 1999 to 190 in 2003. The purity of methamphetamine coming into the State directly from Mexico or through Arizona and California is as high as 98 percent.

## Drug-Related Deaths

The rates of drug-related deaths in New Mexico have exceeded those for the Nation overall since 1990. In 2002, the age-adjusted rate in New Mexico was 16.7 per 100,000 population, compared with 7.6 nationally. In 2003, the rate of unintentional overdose deaths related to methamphetamine was 1.2, considerably lower than the rates for morphine/heroin and cocaine (see exhibit 1). However, the age-adjusted rate for unintentional methamphetamine overdose deaths in 2003 was double the rate for 2002, and it was considerably higher than the rate of 0.2 per 100,000 population in 1994.

Exhibit 1. Rates of Unintentional Overdose<sup>1</sup> Deaths in New Mexico for Selected Drugs: 1994–2003



<sup>1</sup> Not mutually exclusive.

SOURCE: New Mexico Office of the Medical Examiner



Of the total 1,859 overdose deaths in New Mexico from 1995 to 2003, 19.3 percent were in the 2 southern regions of the State (170 in the Southwest and 189 in the Southeast). In each of the four regions of the State, more than three-quarters of the decedents were male. In the two southern regions, nearly one-half of the decedents were White, with only slightly smaller proportions being Hispanic. Also, in the two

southern regions, nearly 29 percent of the 359 deaths were related to prescription drugs, and 71 percent were related to illicit drugs. Nearly 8.4 percent of the 359 overdose deaths in border regions were associated with methamphetamine. The percentages of deaths associated with methamphetamine in the two southern regions were higher than those in the two northern regions (*see exhibit 2*).

**Exhibit 2. Drug Overdose Deaths in New Mexico, by Region: 1995–2003**

Drugs Causing Death <sup>1</sup>	Northwest <sup>2</sup> (n=1,103)	Northeast (n=397)	Southwest (n=170)	Southeast (n=189)
Heroin/morphine	619 (56%)	226 (57%)	71 (42%)	91 (42%)
Cocaine	411 (37%)	164 (41%)	69 (41%)	71 (38%)
Methamphetamine	43 (4%)	7 (2%)	9 (5%)	21 (11%)
Methadone	154 (14%)	46 (12%)	15 (9%)	9 (5%)
Other Opiates	169 (15%)	69 (17%)	43 (24%)	46 (24%)
Antidepressants	75 (7%)	28 (7%)	19 (11%)	10 (5%)
Alcohol	309 (28%)	149 (38%)	62 (36%)	61 (32%)
Over-the-Counter Drugs	49 (5%)	17 (5%)	7 (4%)	11 (6%)

<sup>1</sup>Categories are not mutually exclusive.

<sup>2</sup>Includes Albuquerque.

SOURCE: New Mexico Office of the Medical Examiner

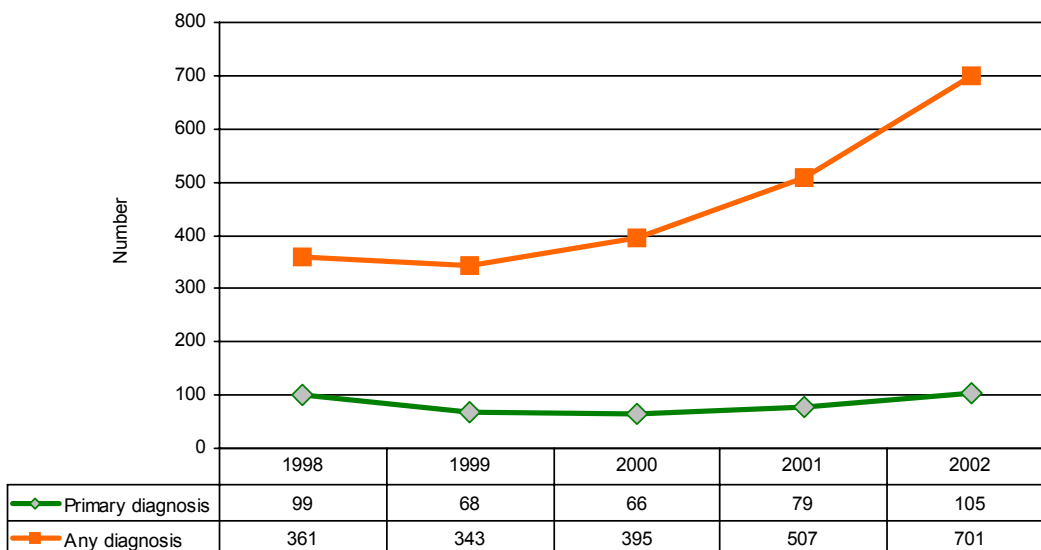
**Hospital Inpatient Discharge Data**

Drug-related hospital inpatient discharge data are submitted voluntarily by non-Federal, licensed general and specialty hospitals in New Mexico. Up to nine diagnoses are included with ICD-9 codes (based on the International Classification of Disease, Ninth Revision). ICD-9 codes related to methamphetamine

include 304.4, 305.7, and 969.7; poisoning codes include 304, 305.2–305.9, and 960–979.

Exhibit 3 depicts the number of methamphetamine-related hospitalizations in New Mexico from 1998–2002. As shown, the number with a “primary diagnosis” increased from 1998 onward, as did those involving “any diagnosis.”

**Exhibit 3. Number of Methamphetamine Hospitalizations in New Mexico: 1998–2002**



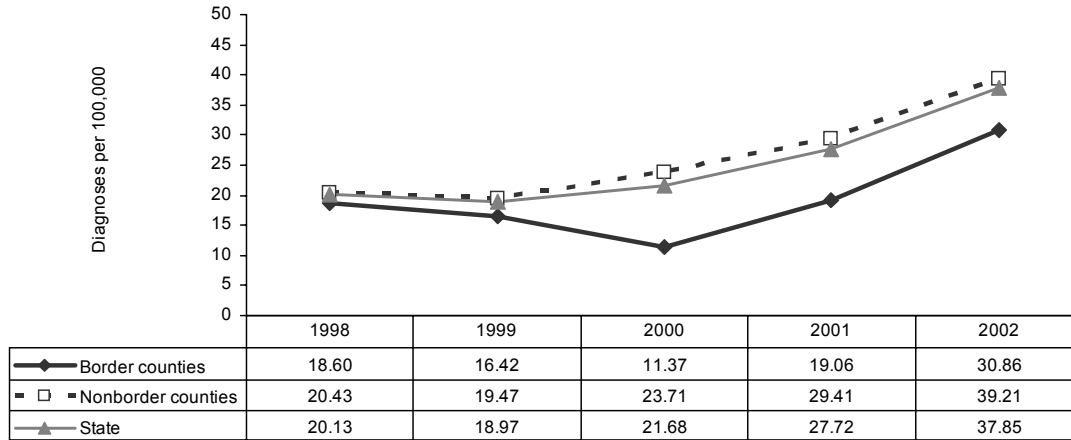
SOURCE: New Mexico Health Policy Commission (Hospital Inpatient Discharge data)

Among poisoning hospitalizations in 2002, methamphetamine accounted for 1.5 percent of the primary diagnosis and 9.7 percent of those with “any diagnosis.”

Statewide, the rate of methamphetamine hospitalizations (patient with any diagnosis) increased substan-

tially from 1998 to 2002, reaching 37.85 per 100,000 population in 2002 (see exhibit 4). The rate in nonborder counties was higher (39.21) than in the State overall or that for border counties (30.86). The 62-percent increase in border counties from 2000 to 2002, however, was quite striking.

**Exhibit 4. Rate of Methamphetamine Hospitalizations (Any Diagnosis) Per 100,000 Population in Border and Nonborder Counties and New Mexico: 1998–2002**

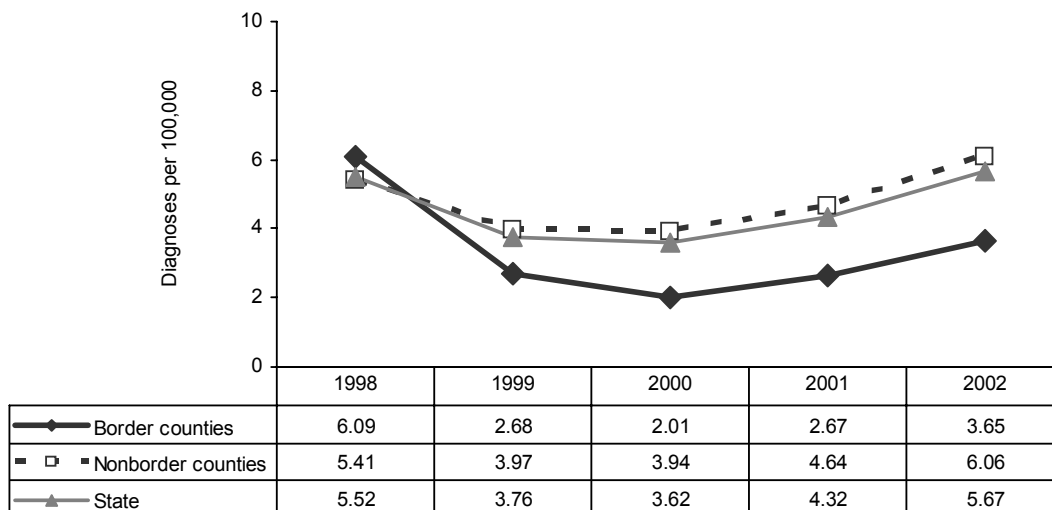


SOURCE: New Mexico Health Policy Commission (Hospital Inpatient Discharge Data)

As a primary diagnosis, the rate of methamphetamine hospitalizations was much lower than the rate for “any diagnosis,” as would be expected. However, as shown in exhibit 5, the increase from 1998 to 2002

was relatively small for the State overall (2.7 percent) and for nonborder counties (12.0 percent). In border counties, the rate decreased by 40 percent.

**Exhibit 5. Rate of Methamphetamine Hospitalizations (Primary Diagnosis) Per 100,000 Population in Border and Nonborder Counties and New Mexico: 1998–2002**



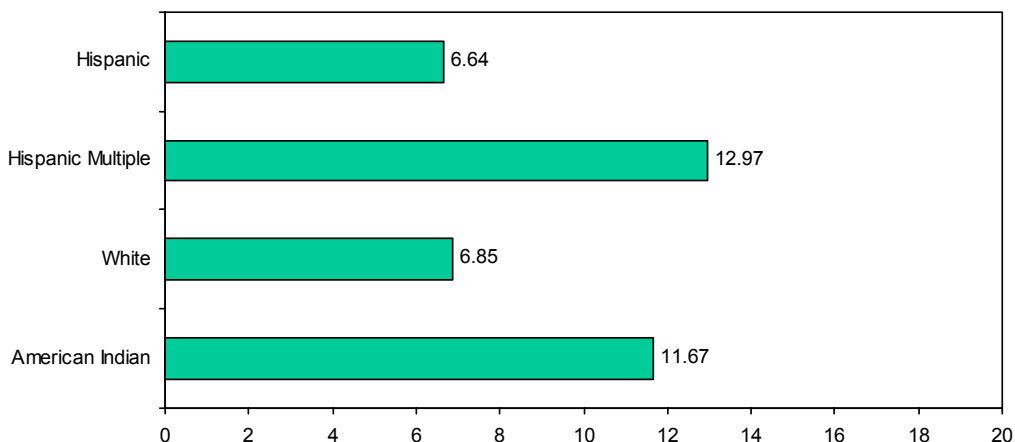
SOURCE: New Mexico Health Policy Commission (Hospital Inpatient Discharge Data)

### School Survey Data

The Youth Risk and Resiliency Survey (YRRS), related to the Centers for Disease Control and Prevention Youth Risk and Behavior Survey, is conducted every other odd-numbered year in the fall. All 89 public school districts in New Mexico that serve students in grades 9–12 are offered the opportunity to participate. Four counties did not participate (Los Alamos, Curry, Lincoln, and Eddy Counties).

In the 2003 YRRS, 8.2 percent of secondary school students had used methamphetamine in the past 12 months. Past-year methamphetamine use was significantly higher among American Indians than among single-ethnicity Whites or single-ethnicity Hispanics. Past-year use was higher among students who self-identified as Hispanic in combination with any other race/ethnicity (Hispanic multiple) than students who self-identified as Hispanic only (*see exhibit 6*).

**Exhibit 6. Past-12-Month Use of Methamphetamine Among Students in Grades 9–12, by Ethnicity and Percent: 2003**



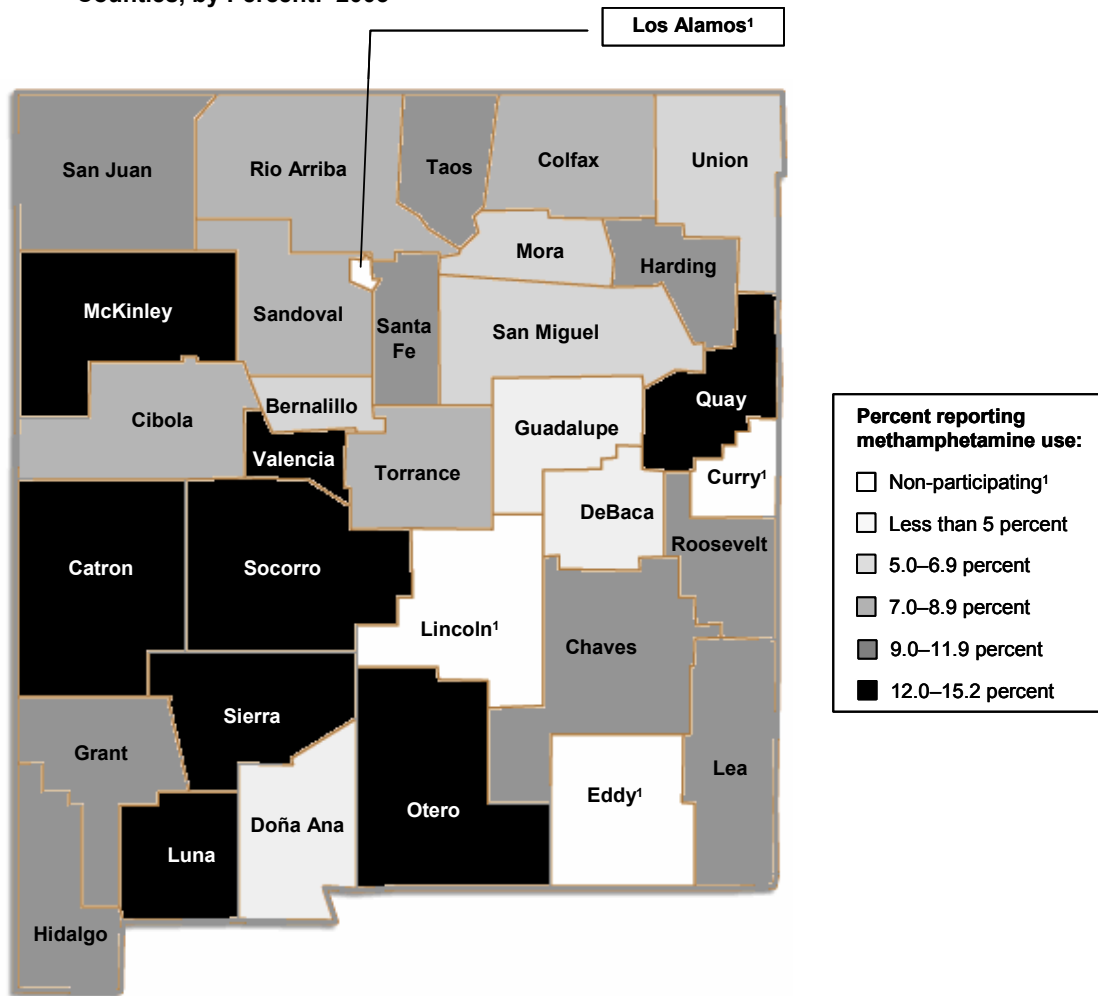
SOURCE: Youth Risk and Resiliency Survey, Centers for Disease Control and Prevention

As shown in exhibit 7, the prevalence of past-year use of methamphetamine varied across the State for participating counties. However, the prevalence was highest along the border and in the southwest quadrant of New Mexico (Luna, Otero, Sierra, Socorro, and Catron Counties at 12.0–15.2 percent, and

somewhat lower in Grant and Hidalgo Counties at 9.0 and 11.9 percent).<sup>1</sup> Prevalence also tended to be high in the counties that border Arizona (Catron, Cibola, McKinley, and San Juan Counties) and Texas (Lea, Roosevelt, and Quay Counties).

<sup>1</sup>The *lifetime* prevalence of methamphetamine use reported nationally in 2003 was 7.6 percent.

**Exhibit 7. Past-12-Month Use of Methamphetamine Among Students in Grades 9–12 in New Mexico Counties, by Percent: 2003**



<sup>1</sup>Four counties did not participate (Eddy, Lincoln, Curry, and Los Alamos Counties).  
SOURCE: Centers for Disease Control

**Law Enforcement Data**

The Drug Enforcement Administration, El Paso Intelligence Center, National Clandestine Laboratory Seizure System, reported that methamphetamine clandestine laboratory seizures increased from 47 in 1999 to 190 in 2003. The influence of Midwest and Texas “meth cooks” appears to be related to an increase in use of the anhydrous ammonia production method. Also, large amounts of iodine are being purchased from feed stores and diverted to methamphetamine production.

Methamphetamine is also shipped into the State directly from Mexico or through Arizona and California, with purity as high as 98 percent. The large amounts of Mexican methamphetamine being smuggled through Arizona Ports of Entry have increased. Mexican nationals control the distribution network, and Albuquerque is the major point of distribution.

The New Mexico State Police estimated that children were present in 30–35 percent of the methamphetamine laboratories seized in the State in 2003. There are also reported increases in child abuse, violent crime, identity theft, robbery, and burglary directly related to the rise in methamphetamine abuse.

# Drug Trends on the U.S.-Mexico Border

Jane C. Maxwell, Ph.D.

Methamphetamine is a problem along the western U.S.-Mexico border, but it is not a problem on the eastern end of the border.

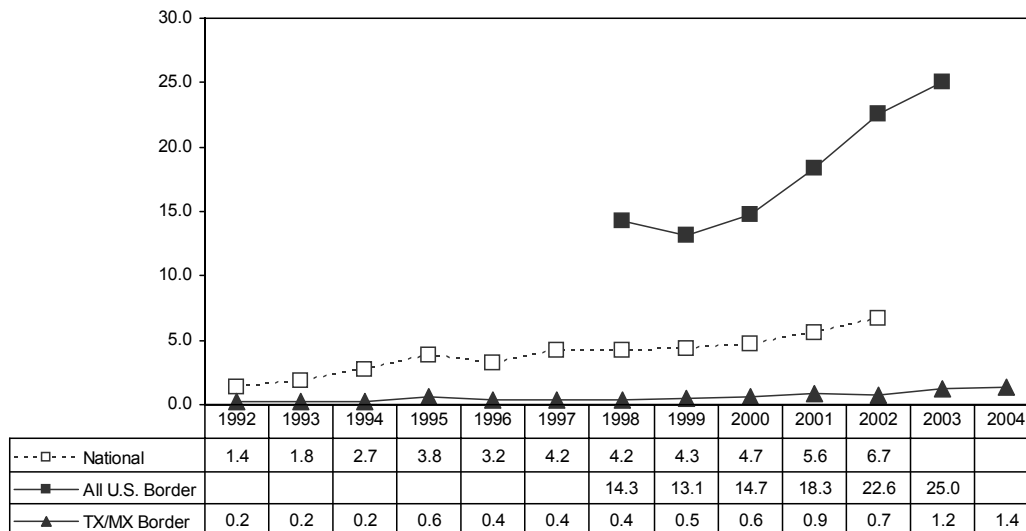
- Methamphetamine treatment admissions are lower nationally than on the border, but there is a difference in admission levels at the western and eastern ends of the border.
  - On both sides of the Texas-Mexico border, crack cocaine admissions have increased over time, while powder cocaine remains a major drug of abuse.
  - Along the Texas-Mexico border, less than 1 percent of all admissions are for problems with methamphetamine/amphetamine.
  - Given the differences in patterns of use of methamphetamine reported in this paper,

differences between the eastern and western ends of the border should be considered.

## Patterns of Methamphetamine Abuse in the United States and Mexico

In the United States, treatment admissions for methamphetamine/amphetamine abuse have increased far more rapidly among States on the U.S.-Mexico border than nationwide, as shown in exhibit 1; however, this phenomenon has not been seen in admissions to border treatment programs in Texas through June 2004. The increase reflects the methamphetamine epidemic in the western United States, where 30.7 percent of all treatment admissions in California in 2003 were for a problem with methamphetamine/amphetamine abuse, compared with 9.6 percent in Arizona, 4.1 percent in New Mexico, and 8.5 percent in Texas. In the counties on the Texas side of the border, methamphetamine abuse accounts for only 1 percent of all treatment admissions.

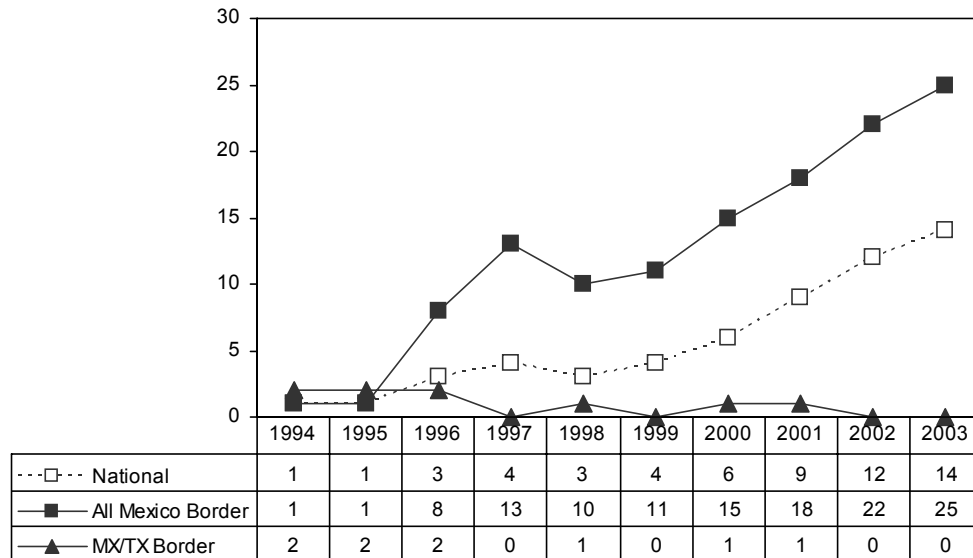
**Exhibit 1. Methamphetamine/Amphetamine as Percentage of Admissions to U.S. Treatment Programs: 1992-2004**



SOURCES: Treatment Episode Data Set and Texas Commission on Alcohol and Drug Abuse

This same trend is seen in Mexican treatment programs, where admissions for methamphetamine/amphetamine abuse now comprise more than one-quarter of all admissions along the entire border. Yet along the Texas border, less than 1 percent of all ad-

missions are for problems with methamphetamine/amphetamine (see exhibit 2).

**Exhibit 2. Methamphetamine/Amphetamine as Percentage of Admissions to Mexican Treatment Programs: 1994–2003**

SOURCE: SISVEA—government and nongovernment treatment programs

Clients admitted to Texas border programs for a primary problem with methamphetamine/amphetamine abuse are different from those admitted to nonborder Texas programs. They are younger (average age, 26.7 vs. 29.8), less likely to be male (19 vs. 48 percent), less likely to use needles (22 vs. 53 percent), and less likely to be involved in the criminal justice system (43 vs. 55 percent). Although the population on the Texas border is heavily Hispanic, only 30 percent of the border methamphetamine clients in 2003 were Hispanic (as were 6 percent of nonborder clients). These differences point to the need for methamphetamine treatment programs on the border to be tailored to meet the special problems of females and younger users who are not involved in the criminal justice system.

The Texas Department of Public Safety laboratories analyze substances that have been seized in law enforcement operations, and the data for 2003 show that methamphetamine is a problem in the northern part

of the State, but not along the border. While 47.8 percent of the exhibits in Abilene and 48.9 percent of the exhibits in Amarillo were methamphetamine, only 0.40 percent of the exhibits in McAllen, 0.28 percent of the exhibits in Laredo, and 4.65 percent of the exhibits in El Paso were methamphetamine.

#### Other Drug Problems on the Texas-Mexico Border

Exhibit 3 shows the primary problem substances for which Texas and Mexican border residents entered treatment between 1998 and 2003. The proportion of heroin admissions in Texas border programs has declined, partially because of shifts in funding, while heroin admissions to Mexican border programs have increased. Methamphetamine admissions have remained very low in programs on both sides of the border. On both sides of the border, crack cocaine admissions have increased over time, while powder cocaine remains a major drug of abuse.

**Exhibit 3. Admissions to Treatment in Texas and Mexico Border Areas, by Percent: 1998–2003**

<b>Texas Programs on the Texas-Mexico Border<sup>1</sup></b>						
<b>Drug</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Heroin	21	20	24	24	15	13
Alcohol	38	36	33	28	28	26
Powder Cocaine	14	14	14	15	16	16
Marijuana	17	19	18	21	27	32
Crack Cocaine	7	8	7	7	10	10
Methamphetamine	0	1	1	1	1	1
<b>Mexican Programs on the Mexico-Texas Border<sup>2</sup></b>						
<b>Drug</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Heroin	11	23	25	35	38	35
Alcohol	13	13	13	14	17	20
Powder Cocaine	29	26	30	27	21	19
Marijuana	16	21	19	14	11	12
Crack Cocaine	1	1	2	2	4	5
Methamphetamine	1	0	1	1	0	0

<sup>1</sup>Texas Commission on Alcohol and Drug Abuse<sup>2</sup>Epidemiologic Surveillance System of Addictions—government and nongovernment treatment programs

The extent of the cocaine problem on the Texas border is also shown by the fact that in Laredo in 2003, 36 percent of male arrestees tested positive for cocaine—a proportion higher than seen in Dallas (33 percent) or Houston (23 percent). Similarly, the Texas Secondary School Survey found that 13.3 percent of border students reported having ever tried powder cocaine, compared with 7.2 percent of non-border students. Some 4.0 percent of border students reported lifetime use of crack cocaine, compared with 2.7 percent of nonborder students. The extent of the cocaine problem on both sides of the Texas-Mexico border may be a reflection of trafficking patterns and also indicate that cocaine is the favorite “upper” in the eastern area of the border, while methamphetamine is the favorite “upper” on the western border.

### Future Directions

Based on this review of the treatment data as well as other studies, it is important to start thinking of the border not as a dividing line between two different countries with different problems, but as an area with similar drug problems and patterns of use regardless of the national boundaries. It might be useful to shift the paradigm and consider, instead, the differences in patterns of use between the eastern and western ends of the border.

Methamphetamine is a drug that has not been well studied, and it is important to begin to describe the physical appearance of the varieties of the drug other than “ice.” More information is needed about the varieties, especially of the “base,” “paste,” or “peanut butter” varieties. In addition, while use of ice by the gay “Party and Play” scene has been described in the literature, there is a paucity of information about use by women, Hispanics, migrants, day laborers, truck drivers, and others who may initially use the drug in work settings.

Lastly, persons who are dependent on methamphetamine are difficult to treat, and use of the Matrix model described in the Center for Substance Abuse Treatment’s *TIP #33, Treatment for Stimulant Use Disorders* (Rawson 1998), should be encouraged.

### Reference

Rawson, R.A. *Treatment of Stimulant Abuse. CSAT Tip #33* (Chair, CSAT Consensus Panel). Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services, 1998.

### **Treatment Data Sources**

National, California, Arizona, and New Mexico Treatment Episode Data Set data were downloaded from <http://www.dasis.samhsa.gov/webt/quicklink/US92.htm>.

Texas data through June 2004 are from the Texas Commission on Alcohol and Drug Abuse.

National and State data from Mexico government and nongovernment programs are from the Epidemiologic Surveillance System of Addictions (SISVEA).



# Methamphetamine Use in the 2003 Survey of Adult Substance Use on the Texas-Mexico Border

Lynn Wallisch, Ph.D.

## The 2003 household survey in three Texas border areas found that...

- **Adults in El Paso (5.9 percent) were more likely than those in the colonias<sup>1</sup> (2.5 percent) and the Lower Rio Grande Valley (2.4 percent) to have used methamphetamine during their lifetime.**
- **Lifetime methamphetamine users were more likely than users of other drugs to be female (42 vs. 29 percent) and age 25–34 (39 vs. 30 percent), but they were less likely to be Hispanic (74 vs. 85 percent).**
- **Methamphetamine users were more likely than users of other drugs to be drug dependent (21 vs. 7 percent) and to be involved in drug possession or sales (29 vs. 6 percent).**

This study, supported by the National Institute on Drug Abuse (R01-DA14794), was conducted in 2003. The methods used in the study and the findings related to methamphetamine use are briefly presented below.

## Study Methodology

The 2003 survey sample was based on a multistage cluster design. The sample was drawn from three areas: El Paso city ( $n=400$ ), the Lower Rio Grande Valley (400), and colonias in Hidalgo and Cameron counties (400). It is estimated that the three survey locations include approximately 81 percent of the adults age 18 and older who reside on the Texas border. Other sampling and study parameters are as follows:

- The sample was randomly selected from census block groups, blocks, households, and respondents.

- Sample stratification for the colonias was based on the number of lots and the percentage of lots that were occupied.
- Screening was used to ensure equal representation by gender and three age categories.
- Post-stratification weights were used for probability of selection and demographics.
- The face-to-face interviews, conducted in English and Spanish, were 40–60 minutes in length.
- Drug abuse and dependence diagnoses were based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV).
- Interviewees were given a \$20 incentive payment.
- SUDAAN was used for statistical analysis.

## Study Findings

The findings show that colonias subjects differed significantly from the other study groups in education and income:

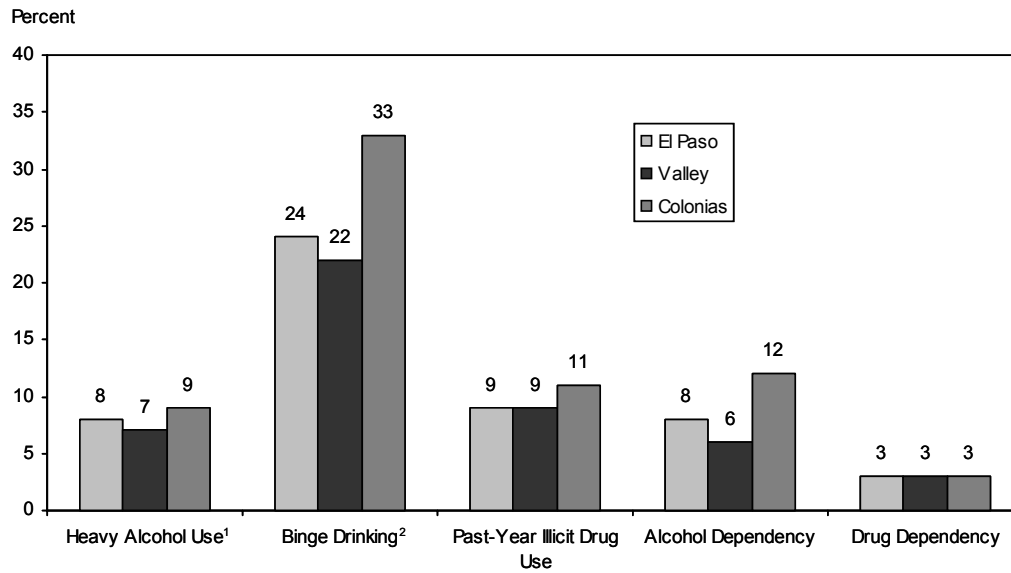
- Nearly two-thirds (63 percent) of colonias subjects had not completed high school, compared with 40 percent of the Valley respondents and 32 percent of the El Paso respondents.
- Approximately 67 percent of colonias respondents had an annual household income of less than \$20,000, compared with 47 percent of both El Paso and Valley respondents.

There were also differences in substance use, with those in the colonias being more likely than the other two groups to report binge drinking and alcohol dependence (*see exhibit 1*).

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<sup>1</sup>In Texas, “colonias”—a Spanish term for neighborhood or community—are unincorporated border communities that often lack adequate water and sewage systems, paved roads, and safe and sanitary housing. Most colonias are outside city limits or in isolated areas of a county. It is estimated that 400,000 people live in colonias from El Paso to the Lower Rio Grande Valley.

**Exhibit 1. Alcohol and Drug Use in Texas Border Sites, by Percent: 2003**



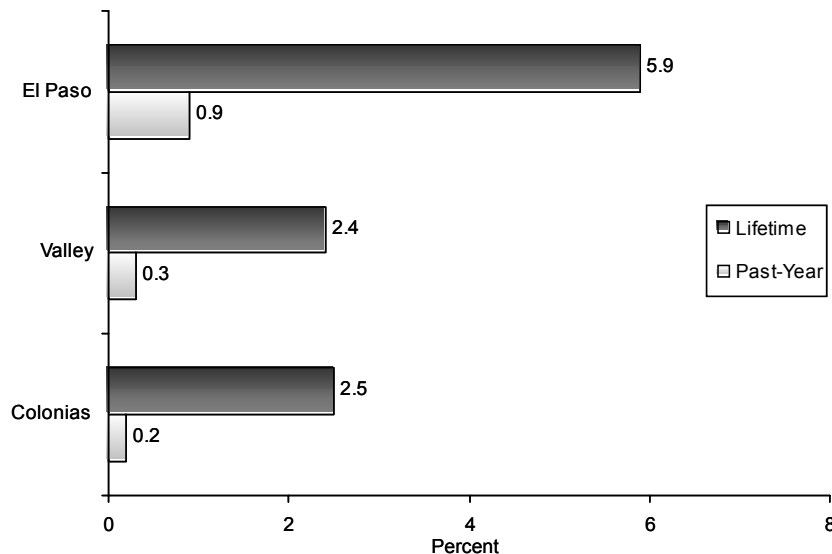
<sup>1</sup>Heavy alcohol use=5 or more drinks on 5 or more occasions in the past month.

<sup>2</sup>Binge drinking=5 or more drinks on 1 or more occasions in the past month.

Across the three sample groups, more than one-quarter (25.5 percent) of the respondents reported using drugs other than methamphetamine or other uppers during their lifetime, and 3.9 percent reported lifetime use of methamphetamine. Respondents in El

Paso (5.9 percent) were more likely than their counterparts in the colonias (2.5 percent) and the Valley (2.4 percent) to report lifetime use of methamphetamine (*see exhibit 2*). Few respondents (0.5 percent) reported past-year use of methamphetamine.

**Exhibit 2. Percentage of Lifetime and Past-Year Users of Methamphetamine Among Border Survey Respondents: 2003**



Other findings on methamphetamine users show the following:

- Lifetime methamphetamine users were more likely than users of “other drugs”<sup>2</sup> to be female (42 vs. 29 percent) and between the ages of 25 and 34 (39 vs. 30 percent), but they were less likely to be Hispanic (74 vs. 85 percent)
- Methamphetamine users were more likely than users of other drugs to be drug dependent (21 vs.

7 percent) and to be involved in drug possession or sales (29 vs. 6 percent)

According to respondents, marijuana and other drugs were more likely to be available and visible in the colonias than in El Paso and the Valley.

Acculturation data show that Anglo-assimilated respondents (18 percent) were more likely than respondents who were bicultural (10 percent) or traditional Mexican (4 percent) to have used drugs in their lifetime.

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<sup>2</sup>“Other drugs” included marijuana, cocaine, crack, downers, heroin, other opiates, and hallucinogens.

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