Drug Abuse Patterns and Trends in New Mexico

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Foreword

On September 14–15, 2004, the New Mexico Department of Health (DOH), in collaboration with the National Institute on Drug Abuse (NIDA), convened a State Epidemiology Work Group (SEWG) meeting in Albuquerque.

In introductory remarks, Moira O'Brien, Division of Epidemiology, Services and Prevention Research, NIDA, reviewed the objectives of the SEWG and provided information about epidemiologic work groups (EWGs). Based on mutual interests, the New Mexico SEWG meeting was planned as a collaborative effort to accomplish the following:

- Apply the EWG model in assessing drug abuse patterns, trends, and emerging problems in areas throughout the State of New Mexico
- Determine what can be learned about drug abuse in different areas of the State
- Identify current and potential data sources
- Stimulate research once issues are identified
- Determine the feasibility of using the model in New Mexico on an ongoing basis

The EWG model has been and continues to be used effectively as a drug abuse surveillance system at the national, State, and local levels. States including Florida, Hawaii, Missouri, Louisiana, Texas, and Washington have used different variations of the model.

NIDA's Community Epidemiology Work Group (CEWG) has been functioning as a drug abuse surveillance system at the national and local levels for more than 28 years. The CEWG is grounded in the knowledge that drug abuse is a local phenomenon, one that differs from community to community and from State to State. The CEWG includes 21 members, who represent different areas across the country and meet semiannually to report on drug abuse patterns and trends in their areas. Researchers in the drug abuse field participate in the meetings, as have representatives of major data sources such as the Drug Abuse Warning Network, Treatment Episode Data Set, National Survey on Drug Use and Health, Monitoring the Future, Youth Risk Behavior Survey, and the National Forensic Laboratory System and other data systems maintained by the Drug Enforcement Administration. Three publications follow each meeting, including a publication that contains each CEWG member's report.

The 21 CEWG members are knowledgeable about…

- The abuse of both licit and illicit drugs and associated health and social consequences
- The communities in the areas they cover
- Numerous data sources (including their strengths and limitations).

In addition, CEWG members have the capacity to…

- Access and analyze relevant data from multiple sources
- Track different drug abuse indicators over time and analyze trends
- Interpret and report data findings
- Conduct exploratory, qualitative studies to gain more in-depth information on issues that arise from the quantitative findings and the meeting discussions
- Communicate and disseminate findings to practitioners, planners, and administrators at the State and local levels.

One essential goal of EWGs is the timely publishing and dissemination of information produced by these meetings.

The task of assessing and monitoring drug abuse patterns and trends has become increasingly more challenging in recent years. Drug patterns are constantly changing. New drugs are being manufactured synthetically and introduced on the streets and in party scenes. Drug abusers are exploring and finding new ways to use drugs. Polydrug abuse has become increasingly common, and patterns of multiple drug use have become more complex.

To determine appropriate targets for intervention and policy development in New Mexico, a reliable system that offers timely and valid data describing the magnitude and extent of the drug problem is required. Functioning epidemiologic work groups can assist local communities and States by providing up-to-date information on drug abuse patterns and trends, including the emergence of new drugs of abuse. Such information can provide the base of evidence needed by planners, policymakers, and providers to make informed decisions and develop appropriate intervention strategies throughout the State.

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KEY FINDINGS

Information presented at the New Mexico State Epidemiology Work Group (SEWG) meeting in September 2004 clearly points to increases in substance abuse and a need to regularly monitor drug abuse patterns and trends across the State. Some findings for the State overall show…

- Rates of drug overdose deaths per 100,000 population increased dramatically from 7.31 in 1994 to 16.96 in 2003. The data show increasing rates for…
  - Illicit drugs—from 5.55 in 1994 to 11.09 in 2003
  - Prescription drugs—from 1.76 in 1994 to 5.87 in 2003.

- Rates of nonfatal drug-related hospitalizations increased 57 percent statewide, from 77 per 100,000 population in 1998 to 121 in 2002; 56 percent of the hospitalizations involved cocaine, amphetamines, opioids, opium, or heroin.

- Treatment admissions for primary drugs of abuse (alcohol, cocaine, marijuana, heroin/other opioids) remained fairly stable from 2001 to 2003, fluctuating no more than 2 percentage points among all admissions groups.

- There were substantial increases in law enforcement seizures of powder cocaine, crack, heroin, and marijuana in the past 18 months.

- Recidivism among female prisoners has steadily increased in New Mexico. A retrospective study of 406 female inmates found that 50 percent were incarcerated for a drug-related crime; 85 percent of these women had a history of drug addiction and 40 percent had injected drugs.

- Research among homeless youth in Albuquerque shows that a community reinforcement approach (CRA) intervention is effective in reducing substance abuse and associated problems, compared with service as usual (SAU). Preliminary findings for pre- to post-treatment changes included:
  - Percentage of days of substance use decreased significantly in the CRA group
  - Decrease for the CRA group in the number of problems related to substance use, as well an increase in the number of days ***not*** living on the streets.

- Qualitative data were collected from 47 Rio Arriba County residents with history of drug use between April 2002 and June 2003. Results highlighted…
  - High frequency of intergenerational drug use, polydrug use, drug overdose, and self-medication using alcohol, marijuana, and prescription drugs
  - Long waiting lists for treatment are problematic, the relapsing and remitting nature of drug use is typical, and there is need for better care and resources following periods of abstinence (i.e., residential treatment, incarceration).

Key findings related to specific substances are shown below.

ALCOHOL

Alcohol indicators point to high levels of abuse of this substance, particularly alongside other drugs, with serious consequences in many cases…

- The number of alcohol and drug cointoxication overdose deaths statewide increased from 45 in 1994 to 78 in 2003, a 73-percent increase.

- Among all drug overdose deaths over a 9-year period (1995–2003), the percentage of alcohol and drug cointoxication deaths varied by Health District…
  - 38 percent in the Northeast
  - 36 percent in the Southwest
  - 32 percent in the Southeast
  - 28 percent in the Northwest.

- Of 64 decedents from prescription drug overdose in 2002, 31 percent had a known history of alcoholism.

- Fifty-two percent of treatment admissions statewide from 2001 to 2003 reported alcohol as the primary substance of abuse. Primary alcohol admissions remained stable during this period, slightly rising from 50 percent in 2001 to 52 percent in 2002 and 2003.
  - 37 percent of primary alcohol admissions were referred to treatment by the criminal justice system; 29 percent were self-referred.

- Among adult male ADAM arrestees in Rio Arriba County from 2002 to 2004, driving under the influence (DUI) was the most common arrest charge and…
  - 91 percent of the arrestees reported drinking five or more drinks of alcohol at one time during their lifetime.
  - 80 percent reported drinking five or more drinks at one time in the past year.

- Among adult male arrestees in a CSAT-supported study, three-quarters were at risk for alcohol abuse or dependence, with 61 percent being at risk for the more severe category of dependence.

COCAINE

Cocaine abuse indicators have been increasing in New Mexico. Drug Enforcement Administration (DEA) officials report that cocaine is a "serious problem" in the State, with street-level cocaine being 20–30 percent pure. The kilograms of cocaine seized thus far in 2004 exceed the quantity for all of 2003 (212 vs. 75 kilograms). Other indicator data show the following:

- Cocaine was associated with high proportions of overdose deaths over a 9-year period (1995–2003), with some variation occurring across Health Districts. By district, cocaine accounted for…
  - 41 percent of overdose deaths in both the Northeast and Southwest
  - 38 percent of overdose deaths in the Southeast
  - 37 percent of the overdose deaths in the Northwest.

- Cocaine accounted for 35.3 percent of the 8,057 nonfatal drug-related hospitalizations from 1998 to 2002; the cocaine hospitalization rate per 100,000 population (based on primary, secondary, and tertiary diagnoses) increased from 26.7 in 1998 to 40.8 in 2002.

- Primary admissions to treatment for cocaine abuse accounted for 6.6 percent of admissions from 2001 through 2003. This percentage was stable over time, from 6 percent in 2001 and 2002 to 7 percent in 2003. Over the 36-month period…
  - Females were more likely than males to be classified as primary cocaine abusers (9 vs. 5 percent of the total admissions)
  - 40 percent of the primary cocaine admissions were self-referred and 21 percent were referred by the criminal justice system.

- The proportions of adult male arrestees testing cocaine-positive in southwest ADAM sites from 2002 to 2004 were quite high…
  - Tucson—43 percent
  - Rio Arriba—41 percent
  - Albuquerque—38 percent
  - Phoenix—28 percent.

- Among 732 Syringe Exchange Program (SEP) participants re-surveyed in 2004, cocaine was the third drug of choice.

- Among students in grades 9–12 who participated in the 2003 Youth Risk and Resiliency Survey (YRRS), 8.9 percent reported using cocaine in the 30 days prior to the survey, a proportion more than twice that of the average for the Nation (4.1 percent). Of the New Mexico students…
  - Past-30-day cocaine use was significantly higher among American Indians (12.42 percent) than Whites (5.96 percent).

HEROIN AND OTHER OPIATES

Heroin available in the State is primarily black tar heroin that is 50–70 percent pure, according to the DEA. Heroin is, as would be expected, the drug of first choice among clients in the State's SEP. There is growing concern about the diversion of methadone. This drug is being used increasingly by physicians to treat chronic pain, and the retail distribution of the drug rose more than 300 percent from 1998 to 2002, from 4,561 grams to 14,318 grams.

Additional indicator data on heroin and other opiates are summarized below:

- Heroin has been the most frequently identified drug in overdose decedents over a 9-year period (1995–2003), especially in northern regions of the State…
  - Northeast—57 percent of overdose deaths
  - Northwest—56 percent
  - Southwest and Southeast—42 percent (each).

- The overdose death rate due to methadone decreased from 2.3 per 100,000 in 1998 to 1.5 in 2002. Illicit drugs were identified in 50.3 percent of these decedents (e.g., heroin, 35 percent; cocaine, 22 percent).
  - Regarding source of methadone, similar numbers of methadone-caused deaths originated from physician prescription for managing pain and for methadone maintenance treatment.

- The proportions of overdose deaths associated with methadone from 1995 to 2003 differed by Health District…
  - Northwest—14 percent
  - Northeast—12 percent
  - Southwest—9 percent
  - Southeast—5 percent.

- Overdose deaths for other opiates from 1995 to 2003 also varied by Health District…
  - Southwest and Southeast—24 percent (each)
  - Northeast—17 percent
  - Northwest—15 percent.

- Nonfatal drug-related hospitalizations associated with heroin accounted for 2.1 percent of the diagnoses (primary, secondary, and tertiary) from 1998 to 2002. Those associated with an opioid accounted for 8.0 percent, those for opium accounted for 1.4 percent, and those for methadone for 1.0 percent of the drug-related hospitalizations.

- Primary heroin treatment admissions accounted for 8.4 percent of the admissions during 2001 through 2003. Over the 36-month period…
  - Female heroin admissions accounted for a slightly larger percentage of all admissions (9 percent) than did male heroin admissions (8 percent)
  - 44 percent of the primary heroin abusers were self-referred.

- Sizable proportions of adult male arrestees from 2002 to 2004 tested opiate-positive, with variation across ADAM sites in the southwest …
  - Rio Arriba—24 percent
  - Albuquerque—10 percent
  - Tucson—7 percent
  - Phoenix—5 percent.

METHAMPHETAMINE/ AMPHETAMINES

Methamphetamine production and abuse have become serious and growing problems in New Mexico. The DEA seized 42.13 kilograms of methamphetamine in 2003 and 37.51 kilograms so far in 2004. Methamphetamine is the second drug of choice among more than 700 SEP clients.

Other indicator data show cause for concern about the abuse of methamphetamine and amphetamines.

- Overdose deaths associated with methamphetamine varied by Health District from 1995 to 2003…
  - Southeast—11 percent of the drug overdose deaths
  - Southwest—5 percent
  - Northwest—4 percent
  - Northeast—2 percent.

- Nonfatal hospitalizations involving amphetamines (as a primary, secondary, or tertiary drug) accounted for 8.8 percent of the drug-related hospitalizations from 1998 to 2002.

- From January 2001 through December 2003, 3.5 percent of treatment admissions were primarily for methamphetamine abuse…
  - Females were more likely than males to be admitted for primary methamphetamine abuse, accounting for 5 and 3 percent of all admissions, respectively.
  - 28 percent of methamphetamine admissions were referred to treatment by the criminal justice system and 30 percent were self-referred.

- In the ADAM study, 18 percent of male arrestees in Rio Arriba reported ever using methamphetamine. The proportions testing methamphetamine-positive varied across southwest sites…
  - Phoenix—31 percent
  - Tucson—9 percent
  - Albuquerque—7 percent
  - Rio Arriba—1 percent.

- Among secondary school students in the YRRS survey, 7.3 percent reported past-30-day use of methamphetamine. Findings on past-12-month use of methamphetamine show…

- American Indians were significantly more likely than Whites or Hispanics (11.67 vs. 6.85 and 6.64 percent, respectively) to have used the drug in the past year and prevalence among Hispanics of multiple ethnicity (12.97 percent) was significantly higher than prevalence among Hispanics of a single ethnicity.

MARIJUANA

The DEA reports that marijuana is readily available and is the most widely consumed illicit drug in New Mexico. Nearly 8,000 kilograms of marijuana have been seized so far in 2004, compared with less than 1,500 kilograms in 2003. Other indicator data show…

- TEDS data show that, from 2001 through 2003, 6.6 percent of admissions were primarily for treatment of marijuana …
  - Females and males had nearly equal proportion of admissions for primary marijuana abuse, accounting for 6 and 7 percent of all admissions, respectively.
  - 33 percent of marijuana admissions were self-referred.

- High proportions of adult male arrestees in the ADAM program since 2002 tested positive for marijuana…
  - Tucson—47 percent
  - Phoenix—41 percent
  - Rio Arriba—46 percent
  - Albuquerque—34 percent.

- In the YRRS survey, 29 percent of New Mexico secondary students reported past-30-day use of marijuana, compared with 22.4 percent nationwide. Prevalence varied by specific groups…
  - American Indian students were significantly more likely than students in other racial/ethnic groups to report past-30-day use of marijuana: 45.24 percent versus 28.53 percent of Hispanics of multiple ethnicity, 29.98 percent of Hispanics, and 20.06 percent of White students.

PRESCRIPTION DRUG ABUSE

As in other States, death from prescription drugs has been increasing in New Mexico, and there is rising concern about diversion to the illicit market. One of the most commonly diverted prescription drugs in the State is OxyContin, according to DEA. The rise in abuse of prescription drugs in New Mexico appears in several indicators.

- The statewide rate of overdose deaths associated with prescription drugs rose from 1.11 per 100,000 persons in 1995 to 5.87 in 2003. The rates varied across the four New Mexico Health Districts…
  - Southeast—from 0.8 in 1995 to 6.2 in 2003
  - Northwest—from 1.5 in 1995 to 6.1 in 2003
  - Northeast—from 1.5 in 1995 to 5.5 in 2003
  - Southwest—from zero in 1995 to 4.9 in 2003.

- There were significantly more deaths from opioid painkillers (oxycodone, hydrocodone, propoxyphene, codeine, mepiridine) in the southern quadrants (24 percent) than in the northern quadrants (15–17 percent).

- A review of 64 cases of unintentional prescription drug overdose deaths showed that 41 percent had a history of prescription drug abuse, 31 percent had a known history of alcohol abuse, and 31 percent had a history of illicit drug abuse.

- In an exploratory study of 31 undergraduate students at the University of New Mexico, students reported nonmedical use of 35 prescription drugs, with narcotic analgesics and benzodiazepines being the most frequently used. Other substances were often used in combination with the prescription-type drugs, especially alcohol and marijuana.

Drug Overdose Deaths In New Mexico

Overview of Drug Overdose Deaths in New Mexico

Michael Landen, M.D., M.P.H.

Introduction

In recent years, the New Mexico Department of Health has focused attention on drug abuse problems in northern New Mexico, primarily because the consequences of drug abuse were most severe in this area since the mid 1990s. However, drug abuse indicators show that the drug abuse problem in New Mexico is more widespread, and they point to a need to develop the capacity to assess and monitor drug abuse and its consequences throughout the State.

New Mexico has the highest rate of drug overdose deaths in the United States. This problem needs to be understood and addressed from a public health perspective, and ongoing surveillance of the problem is required.

The goals of this meeting are as follows:

- To present and review New Mexico data on drug abuse and its consequences from a variety of sources.
- To determine the usefulness of a State Epidemiology Work Group (SEWG) focused on drug abuse data.

Drug Abuse Deaths in New Mexico

In New Mexico, the two major sources of death data are the Office of Vital Records and Health Statistics (OVRHS), and Office of the Medical Investigator (OMI).

As shown in exhibit 1, the rate of drug-related deaths in New Mexico and the Nation overall have been increasing since 1990. However, the rate in New Mexico has been at least twice the rate for the Nation during the 12-year period from 1990 to 2001. The New Mexico drug-related death rate increased to more than 16 per 100,000 in 2002.

According to the Centers for Disease Control and Prevention, the States with the highest rates of unintentional drug overdose deaths in 2001 were: New Mexico (11.8), Arizona (8.5), Florida (8.3), Alaska (8.1), and Nevada (7.6).

Drug-related death rates in New Mexico are highest and increasing among White Hispanics. From 1989 to 1991, White Hispanics had a drug-related death rate of 16.4 per 100,000, which increased to 20.1 during 2000–2002. For White non-Hispanics, the rates were somewhat lower at 7.9 (1989–1991) and 14.0 (2000–2002). During the two time periods, Native Americans had the lowest drug-related death rates at 3.6 and 4.3, respectively (OVRHS).

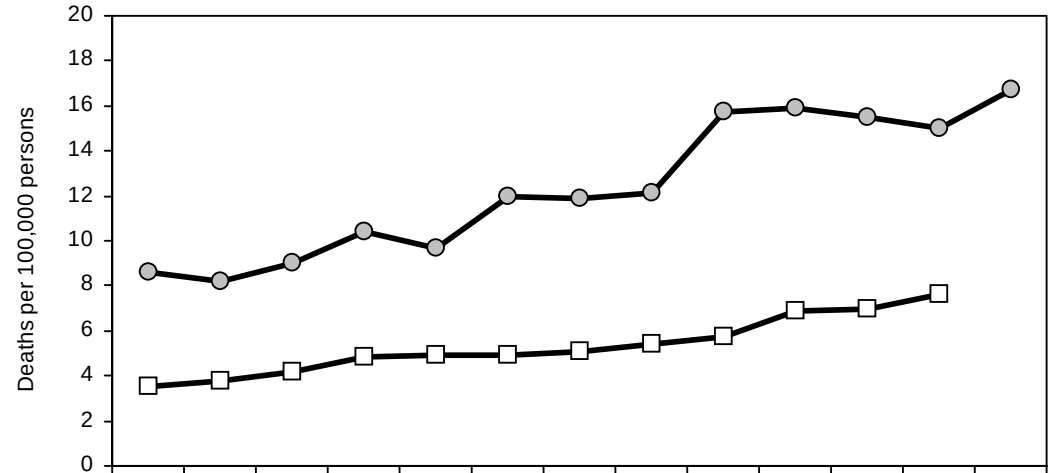
OMI data show increasing numbers of drug overdose deaths in New Mexico from 121 in 1994 to 307 in 2003. Overdose deaths are reported by OMI for two categories: (1) illicit and (2) prescription drug overdose deaths. The number of overdose deaths increased in both categories between 2001 and 2003, but there was a much sharper increase in prescription drug overdose deaths between 2002 (66) and 2003 (107). As shown in exhibit 2, the rate of prescription drug overdose deaths per 100,000 population increased from 3.7 in 2002 to 5.9 in 2003. The rate of illicit drug overdose deaths increased from 10.5 to 11.1 during this period.

In 2003, the median age of decedents from prescription drug overdose death (45.3) was somewhat higher than those who died of an illicit drug overdose (40.5). Although males accounted for most of the drug overdose deaths in 2003 (217 vs. 90 for females), the percentage of deaths among females has increased.

Exhibit 3 shows the number of drug overdose deaths from 1994 to 2003 that were caused by particular types of drugs. The four types include illicit drugs, prescription drugs, alcohol, and over-the-counter (OTC) drugs. The categories are not mutually exclusive; deaths could and were likely to involve more than one substance. These data also show a larger increase in the number of prescription drug overdose deaths (from 81 in 2002 to 119 in 2003) than the increase in the number of overdose deaths in the illicit drug, alcohol, and OTC drug categories. In 2003, 194 overdose deaths were caused by an illicit drug, a number higher than in each of the 9 prior years.

In reviewing drug overdose deaths by metropolitan statistical area (MSA) in New Mexico from 1994 to 2003 (exhibit 4), similarities and differences were identified. Farmington had a much lower proportion of illicit drug overdose deaths and a much higher proportion of prescription drug overdose deaths than the other areas (i.e., Albuquerque, Las Cruces, Santa Fe, and those outside of any MSA). The proportions of deaths reported in other areas were similar. Illicit drugs caused more than three-quarters of the deaths in Albuquerque, Las Cruces, and Santa Fe.

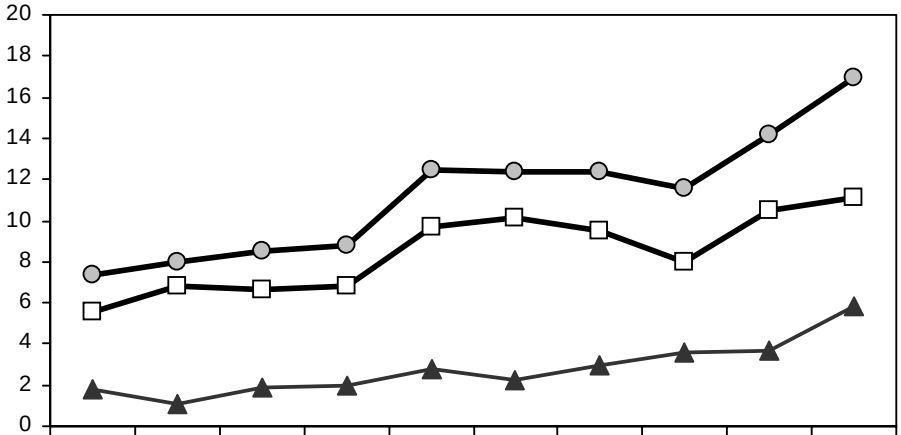
Exhibit 1. Drug-Related Death Rates[1] Per 100,000 Population in New Mexico and the United States: 1990–2002



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
NM	8.6	8.2	9.0	10.4	9.7	12.0	11.9	12.1	15.7	15.9	15.5	15.0	16.7
US	3.5	3.8	4.2	4.8	4.9	4.9	5.1	5.4	5.7	6.9	7.0	7.6	

[1]Rates are age-adjusted to the 2000 U.S. Standard Population.
SOURCES: Office of New Mexico Vital Records and Health Statistics, NMDOH, CDC Wonder

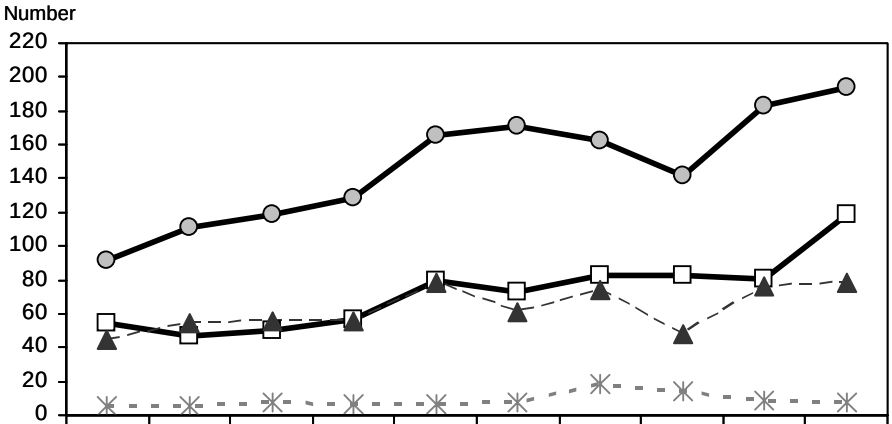
Exhibit 2. Rates[1] of Prescription and Illicit Drug Overdose Deaths Per 100,000 Population in New Mexico: 1994–2003



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	7.31	7.95	8.49	8.81	12.47	12.40	12.42	11.56	14.17	16.96
Illicit	5.55	6.84	6.63	6.82	9.72	10.17	9.47	7.96	10.52	11.09
Prescription	1.76	1.11	1.86	1.99	2.75	2.23	2.96	3.60	3.65	5.87

[1]Rates are age-adjusted to the 2000 U.S. Standard Population.
SOURCE: The New Mexico Office of the Medical Examiner

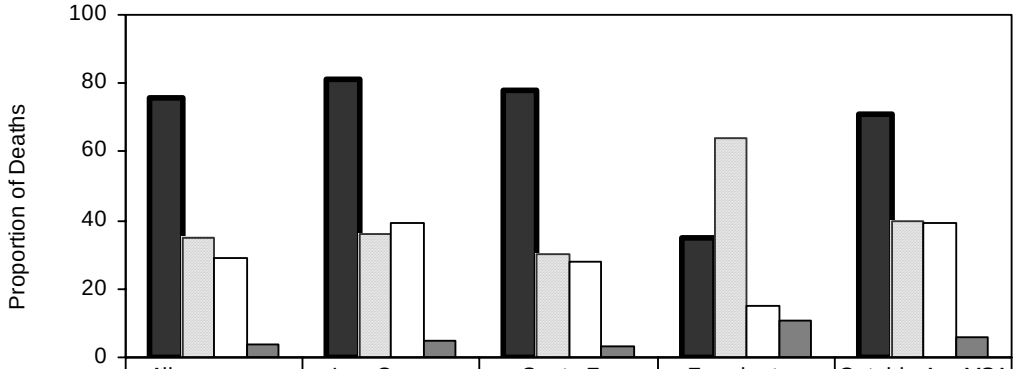
Exhibit 3. Number of Drug Overdose Deaths by Category[1] of Drug Causing Death in New Mexico: 1994–2003



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Illicit	92	111	119	128	166	171	162	142	183	194
Prescription	54	47	50	57	80	73	83	83	81	119
Alcohol	45	55	56	56	78	61	74	48	76	78
OTC	5	5	8	7	6	8	19	14	9	8

[1]Categories are not mutually exclusive.
SOURCE: The New Mexico Office of the Medical Investigator

Exhibit 4. Category[1] of Drug Causing Death and MSA Groupings Over 10 Years in New Mexico: 1994–2003



	Albuquerque (n=1,090)	Las Cruces (n=98)	Santa Fe (n=169)	Farmington (n=55)	Outside Any MSA (n=570)
Illicit	76	81	78	35	71
Prescription	35	36	30	64	40
Alcohol	29	39	28	15	39
OTC	4	5	3	11	6

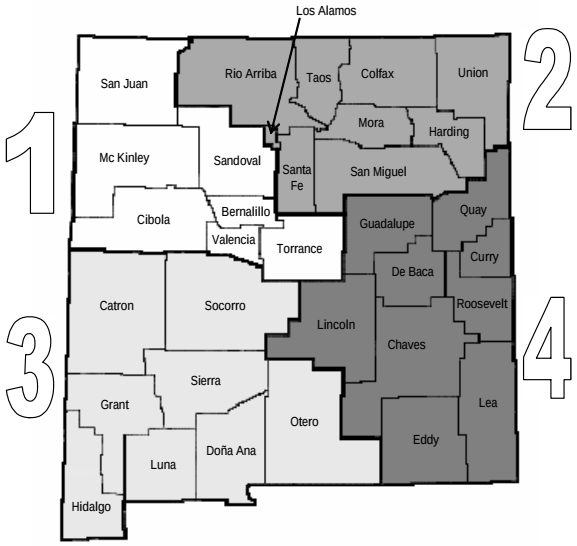
[1]Categories are not mutually exclusive.
SOURCE: The New Mexico Office of the Medical Investigator

Drug Overdose Deaths in New Mexico's Public Health Districts: 1995–2003

Thomas N. Scharmen, M.A., M.P.H., Lisa Roth-Edwards, M.P.H., C.H.E.S., and Nina Shah, M.S.

In the 9-year period from 1995 to 2003, there were 1,859 drug overdose deaths recorded in New Mexico. More than one-half (53 percent) of the decedents were residents of the Northwest Health District (District 1), which includes the cities of Albuquerque and Farmington. Approximately 15 percent resided in the Northeast (District 2), followed by 18 percent in the Southwest (District 3) and 14 percent in the Southeast (District 4). The four different Health Districts are shown in the map below.

Public Health Districts in New Mexico



Overview

Of the 1,859 decedents, more than two-thirds were male in each of the 4 districts. The median age of the decedents was lowest in the Northeast District (38.3).

In terms of race/ethnicity, nearly three-quarters (74 percent) of the decedents in the Northeast were Hispanic, compared with 50 percent in the Northwest, 46 percent in the Southeast, and 45 percent in the Southwest. The largest proportion of decedents in the Southeast (49 percent) was White non-Hispanic. The percentages of American Indian, Asian, and Black decedents were low in all four regions.

Most of the drug overdose deaths in all districts were attributed to illicit drugs: 78 percent in the Northeast, 75 percent in the Northwest, 74 percent in the Southeast, and 69 percent in the Southwest. The Southwest had the highest proportion of overdose deaths related to prescription drugs (31 percent).

As shown in exhibit 1, there were only small regional differences in the proportions of deaths caused by cocaine, antidepressants, and over-the-counter (OTC) drugs in the 9-year period. Differences in other drugs involved in the overdose deaths varied by district and can be summarized as follows:

- Heroin/morphine was the drug most frequently identified in decedents in all regions; however, it was significantly less common in the southern quadrants (42 percent) than in the northern quadrants (56–57 percent).

- Deaths from methamphetamine were considerably more common in the Southeast District (11 percent of the deaths) than in the other districts (2–5 percent).

- Methadone caused death more often in the northern quadrants (12–14 percent) than in the southern ones (5–9 percent).

- There were significantly more deaths from opioid painkillers (oxycodone, hydrocodone, propoxyphene, codeine, and meperidine) in the southern quadrants (24 percent) than in the northern quadrants (15–17 percent).

- A significantly larger proportion of drug overdose deaths in the Northeast District was caused by alcohol (38 percent); the lowest proportion (28 percent) was in the Northwest District, which includes Albuquerque.

Although rates can be unpredictable because of many potential factors that contribute to overdose deaths, the data point to disturbing increases in deaths involving illicit drugs. From 1995 to 2003, rates of illicit drug overdose deaths per 100,000 population increased in all districts except the Northeast (*see exhibit 2*). While the Northeast has had the highest rates of overdose deaths since the mid-1990s, the increases in the Northwest were equivalent in 2003. Also, the upward trend in the last few years in the southern half of the State is of concern, since the overdose death rate nearly doubled from 2001 to

2003. The decrease in illicit drug overdose deaths in the Northeast is encouraging, given the recent efforts and resources devoted toward counties in that district, such as Rio Arriba, Santa Fe, and Taos.

In 2003, rates of prescription drug overdose deaths reached their highest levels since 1995, ranging across the four districts from 4.9 to 6.2 per 100,000 population (*see exhibit 3*). From 2000 to 2003, the rates increased 69 percent in the Northwest (from 3.6 to 6.1 deaths per 100,000 population), 129 percent in the Northeast (2.4 to 5.5 deaths per 100,000 population), 145 percent in the Southwest (2.0 to 4.9 deaths per 100,000 population), and 170 percent in the Southeast (2.3 to 6.2 deaths per 100,000 population).

In the sections that follow, more detailed information will be presented for each of the four districts.

District 1—Northwest Region

District 1, comprised of seven counties in the central and northwestern/central quadrant of the State, is home to 53 percent of New Mexico's population. Although this district includes a few of the larger urban centers, including Albuquerque, Farmington, and Gallup, it also has rural areas, such as Torrance and Cibola Counties. Albuquerque, the State's largest urban area, is located in Bernalillo County, where 59 percent of the District 1 population reside. Nearly one-third of the State's population is in Bernalillo County. The district overlaps with the Navajo Nation, has the largest population of American Indians in the State, and is home to Four Corners (located in the most northwestern part of New Mexico).

From 1995 to 2003, 1,103 drug-caused deaths occurred in District 1:

- More than three-quarters (79 percent) occurred in Bernalillo County.
- Most (98 percent) were persons age 15–24.
- About three-quarters (75.6 percent) were male.
- Slightly more than three-quarters involved illicit drugs (*see exhibit 1*).
- Age-adjusted death rates for both illicit and prescription drug deaths increased from 1995 to 2003 (*see exhibits 2 and 3*).
- The numbers of deaths caused by cocaine, methadone, and methamphetamine increased more than those for other drugs.
- Fourteen percent involved methadone, more than in any other district.

District 2—Northeast Region

District 2 accounts for 15 percent of the New Mexico resident population. More than one-half of the district's population is Hispanic. Santa Fe, with a population of approximately 65,000 residents, is the largest metropolitan area in the district and one of the State's largest urban areas. In terms of population density, Harding County has 0.4 persons per square mile and, at the other end of the spectrum, Los Alamos County has 168 persons per square mile. Other than Santa Fe County, with 68 persons per square mile, the other District 2 counties have densities of less than 14 persons per square mile. District 2 comprises the southern end of the Rocky Mountains, which reach more than 12,000 feet and provide a milieu for skiing, camping, and hunting industries. More than 8 percent of the housing is for "seasonal, recreational, or occasional" use—twice the proportion for the State overall. One-quarter of Colfax County housing and 17 percent of Taos County housing is in this category, reflecting the importance of recreational use housing in District 2.

From 1995 to 2003, there were 397 drug overdose deaths in District 2. These deaths occurred in the counties of Colfax (2 percent), Los Alamos (3 percent), Mora (0.5 percent), Rio Arriba (34 percent), Santa Fe (41 percent), and Taos (8 percent). The following summarizes information about these decedents:

- Seventy-nine percent of the decedents were male.
- Seventy-four percent were Hispanic, 24 percent were White, and 2 percent were American Indian.
- The median age of the decedents was 38.3 (range=14–70).
- The proportion of female decedents among all drug overdose deaths fluctuated between 15 and 30 percent per year.
- Nearly 80 percent of the deaths involved illicit drugs, primarily heroin/morphine and cocaine (*see exhibit 1*), with some proportions of the deaths involving alcohol (38 percent), antidepressants (7 percent), and OTC drugs (5 percent).

While not statistically significant, the number of deaths from illicit drugs increased from 1997 to 2003. Deaths from alcohol and OTC drugs remained fairly stable from 1995 onward. However, from 2002 to

2003, there were decreases in the numbers of deaths from heroin, cocaine, alcohol, methadone, and amitriptyline, but there was a slight increase in deaths from oxycodone, methamphetamine, and propoxyphene.

The number and percentage of prescription drug deaths increased significantly from 1995 to 2003. The percentage increased from 2000 to 2001 (14 to 31 percent), decreased in 2002 (to 21 percent), and rebounded in 2003 (to 32 percent). More than one-half of the deaths among persons 55 and older were from prescription drugs. Although the numbers were small, there was a statistically significant increase in the proportion of prescription drug deaths among all deaths as age increased ($p<0.001$).

In age-adjusted rates, the *total* overdose deaths increased sharply from 1997 to 2003, with illicit drug overdose rates mirroring the overall trend and doubling from 9.9 deaths per 100,000 population in 1997 to 18.4 in 2000. From 1995 to 2003, the illicit drug death rate in District 2 decreased, while that in other districts increased (*see exhibit 2*). However, as in other districts, the death rate from prescription drugs in District 2 consistently increased from 1995 to 2003, from 1.5 to 5.5 in the respective years (*see exhibit 3*).

Statistically significant differences in District 2 deaths from 1995 to 2003 include the following:

- Males accounted for larger proportion of illicit drug deaths than females (85 vs. 68 percent) and for a larger proportion of alcohol deaths (44 vs. 14 percent).
- Females accounted for a larger proportion of prescription drug deaths than males (57 vs. 32 percent) as well as OTC deaths (11 vs. 3 percent).
- Alcohol accounted for a smaller proportion of deaths among White decedents than among persons in other racial/ethnic groups.

District 3—Southwest Region

According to 2002 census data, 18 percent of New Mexico's population (*n*=335,613) reside in District 3. District 3 represents the second largest population base in the State. Six of the 8 counties are located in the Border Zone (100 kilometers of the international boundary with Mexico). Consequently, the proportions of foreign-born residents in border counties are substantial. For example, 19.5 percent of Luna County and 18.7 percent of Doña Ana County residents are foreign born, both well above the State average of 8.2 percent. Las Cruces, the largest metropolitan area with a population of 74,267, is located in Doña Ana County. Population density in District 3 ranges from 0.5 persons per square mile in Catron County to 45.0 persons per square mile in Doña Ana County. There are a variety of climates, ranging from desert temperatures in the southern region to wilderness in the northern part of the district, which is home to the Gila National Forest.

An analysis of OMI data, conducted on 170 drug overdose deaths in District 3 from 1995 to 2003, shows the following:

- Seventy-eight percent (*n*=133) were male.
- Forty-nine percent (*n*=81) were White, non-Hispanic.
- Forty-six percent (*n*=76) were Hispanic.
- Five percent were Asian or Black (*n*=5) or American Indian (*n*=2).
- The median age of the decedents was 41.2 years (range= 17.9–75.7)

The majority of the deaths (51 percent) occurred in residents from Doña Ana County, followed by Otero County (17 percent) and Grant County (13 percent). Hidalgo County had the lowest proportion of drug overdose deaths (2 percent) in District 3.

Of the 170 deaths in District 3 from 1995 to 2003, 69 percent (*n*=117) were from illicit drugs and 31 percent (*n*=53) were from prescription drugs. Of the illicit drugs causing death,[1] most involved heroin/morphine and cocaine (*see exhibit 1*). Prescription drug-involved deaths in District 3 included methadone (9 percent), other opiates[2] (24 percent) and antidepressants[3] (11 percent). Alcohol was the drug causing death in 36 percent of the deaths. Over-the-counter drugs[4] accounted for the lowest reported proportion, at 4 percent.

According to the type of drug causing death, illicit drugs caused 80 percent (*n*=106) of all male drug

[1] Drugs causing deaths are not mutually exclusive.
[2] Other opiates include oxycodone, hydrocodone, propoxyphene, meperidine, and codeine.
[3] Antidepressants include amitriptyline, sertraline, trazodone, desipramine, venlafaxine, and paroxetine.
[4] Over-the-counter drugs include acetaminophen, aspirin, and diphenhydramine.

overdose deaths, significantly higher than the 30 percent (*n*=11) for females from the same cause ($p < 0.001$).

Over time, the proportion of female drug overdose deaths among all drug overdose deaths increased significantly, from zero in 1995 to 31 percent in 2003 ($p = 0.008$). Along with the increase in the proportion of female deaths from drug overdose, District 3 experienced a significant increase in the proportion of female deaths involving prescription drugs, from zero in 1995 to 43 percent (*n*=15) in 2003 ($p = 0.012$).

Finally, age-adjusted rates for drug overdose deaths show that, from 1995 to 2003, the total drug overdose death rate rose from 3.8 to 11.3 deaths per 100,000 population, an increase driven in part by the increasing number of deaths related to prescription drugs. While the rates of deaths from illicit drugs have been consistently higher than those from prescription drugs since 1995, the rate of death from prescription drugs in District 3 doubled from 2.4 deaths per 100,000 in 2002 to 4.9 in 2003.

District 4—Southeast Region

Fourteen percent of New Mexico' population resides in the nine counties that make up District 4. The district covers 31,551 square miles in the southeastern part of the State. The largest urban area is Roswell, with a population of 45,293; the smallest is Fort Sumner in De Baca County, with a population of 2,138. Other population areas include Clovis (32,667), Hobbs (28,657), and Carlsbad (26,860). The population varies widely by race/ethnicity throughout the district; overall, according to the 2000 census, 54.7 percent are White non-Hispanic, 40.6 percent are Hispanic, 2.1 percent are Black, and 1.2 percent are American Indian. The median age of residents is 36.8. The median income in District 4 is $28,307, compared with $34,133 for the State and $41,944 for the Nation.

The major industries in District 4 are oil and gas exploration, farming and ranching, dairies and cheese manufacturing plants, the military (Cannon Air Force Base), and recreation and tourism. There are several institutions of higher learning in the district.

From 1995 to 2003, there were 189 drug overdose deaths in District 4. Three-quarters of the deaths were in the counties of Chaves (38 percent), Eddy (23 percent), and Lea (14 percent). The demographic characteristics of these decedents were as follows:

- Seventy-seven percent were male.
- Forty-nine percent were White non-Hispanic.
- Forty-six percent were Hispanic.
- Five percent were Black or Asian.
- The median age was 41.0 (range=0–94).

Three-quarters of the overdose deaths involved illicit drugs, including heroin (42 percent), cocaine (38 percent), and methamphetamine (11 percent) (*see exhibit 1*). Thirty-two percent involved alcohol. Nearly one-quarter of the deaths involved opioid painkillers other than methadone, 5 percent involved methadone, 5 percent involved antidepressants, and 6 percent involved OTC drugs.

Analyses of District 4 overdose deaths from 1995 to 2003 show the following:

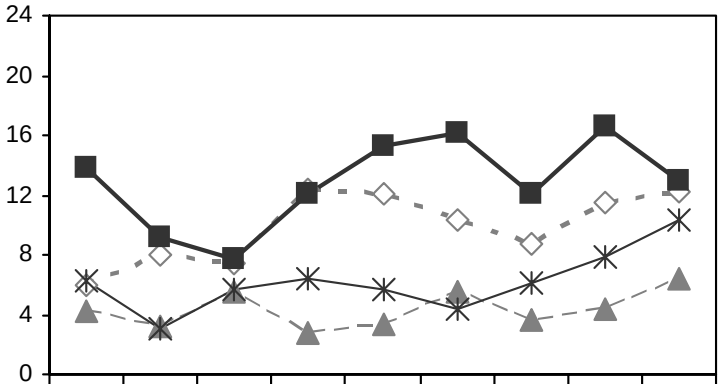
- There was a statistically significant increase in the percentage of female overdose deaths (trend test, $p=0.05$). Females accounted for 15–20 percent of drug overdose deaths through 2001; this proportion increased to 24 percent in 2002 and rose dramatically to 38 percent in 2003.
- There was a statistically significant increase in the proportion of prescription drug deaths among all overdose deaths with increasing age ($p<0.001$).
- Among all overdose deaths, there was a significantly larger proportion of illicit drug deaths among males than females (83 vs. 56 percent) and a larger proportion of alcohol deaths among males than females (37 vs. 16 percent).
- There was a significantly larger proportion of female than male deaths involving prescription drugs (56 vs. 29 percent) and OTC drugs (15 vs. 4 percent).
- A smaller proportion of deaths involving illicit drugs occurred among Whites than among persons of other races ($p<0.001$).

Exhibit 1. Drug Overdose Deaths in New Mexico by Public Health District: 1995–2003

Drugs Causing Death[1]	Northwest (*n*=1103)		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[2]	169	(15%)	69	(17%)	43	(24%)	46	(24%)
Antidepressants[3]	75	(7%)	28	(7%)	19	(11%)	30	(5%)
Alcohol	309	(28%)	149	(38%)	62	(36%)	61	(32%)
OTC[4]	49	(5%)	17	(5%)	7	(4%)	11	(6%)

[1]Categories are not mutually exclusive.
[2]Other opiates include oxycodone, hydrocodone, propoxyphene, meperidine, and codeine.
[3]Antidepressants include amitriptyline, sertraline, trazodone, desipramine, venlafaxine, and paroxetine.
[4]Over-the-counter drugs include acetaminophen, aspirin, and diphenhydramine.
SOURCE: New Mexico Department of Health and New Mexico Office of the Medical Investigator

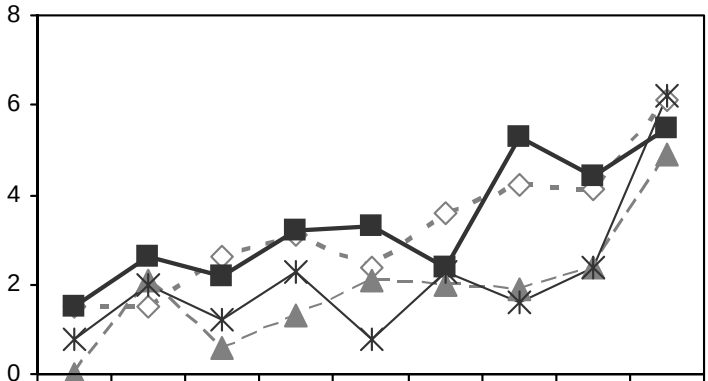
Exhibit 2. Rates of Illicit Drug Overdose Deaths Per 100,000 Population in New Mexico, by District: 1995–2003



	1995	1996	1997	1998	1999	2000	2001	2002	2003
D1 (Northwest)	6.0	8.0	7.5	12.3	12.1	10.3	8.7	11.5	12.2
D2 (Northeast)	13.8	9.1	7.7	12.1	15.3	16.1	12.1	16.6	12.9
D3 (Southwest)	4.2	3.2	5.5	2.7	3.4	5.6	3.6	4.4	6.4
D4 (Southeast)	6.3	3.1	5.7	6.4	5.7	4.4	6.1	7.9	10.4

SOURCE: New Mexico Department of Health and New Mexico Office of the Medical Investigator

Exhibit 3. Rates of Prescription Drug Overdose Deaths Per 100,000 Population in New Mexico, by District: 1995–2003



	1995	1996	1997	1998	1999	2000	2001	2002	2003
D1 (Northwest)	1.5	1.5	2.6	3.1	2.4	3.6	4.2	4.1	6.1
D2 (Northeast)	1.5	2.6	2.2	3.2	3.3	2.4	5.3	4.4	5.5
D3 (Southwest)	0	2.1	0.6	1.3	2.1	2	1.9	2.4	4.9
D4 (Southeast)	0.8	2	1.2	2.3	0.8	2.3	1.6	2.4	6.2

SOURCE: New Mexico Department of Health and New Mexico Office of the Medical Investigator

Methadone Overdose Deaths in New Mexico: 1998–2002[1]

Nina Shah, M.S.

In recent years, there has been growing concern, nationally and in many States, about the increased availability and abuse of methadone. Over time, methadone maintenance has proven to be one of the most effective treatment modalities for heroin addiction. In recent years, there has been an increase in the practice of prescribing methadone to treat chronic pain, since it is long-lasting and less expensive than other pain medications. However, the increases in methadone-related deaths reported in some States have raised concern.

The retail distribution of methadone in New Mexico increased from 4,561 grams in 1998 to 14,318 in 2002, an increase of more than 300 percent. This fact, and the increase in methadone-related deaths in New Mexico, led to a study of deaths associated with methadone across the State.

To determine the extent to which methadone was cited as a cause of death in New Mexico, medical examiner data from 1998 through 2002 were accessed and analyzed on deaths caused by methadone (methadone-related), alone or in combination with other substances (alcohol and/or other drugs). Attention was also focused on the characteristics of the decedents and the areas in which they lived. The data were provided by the Office of the Medical Investigator and the Toxicology Bureau of the Scientific Laboratory Division, New Mexico Department of Health.

Of the 1,120 unintentional overdose deaths reported in New Mexico during the 5-year period, 143 (12.8 percent) were methadone-related deaths. Among the methadone-related deaths, 74.8 percent of the decedents were male, 54.5 percent were White non-Hispanic, and the median age was 40 years; most had a history of chronic pain.

Over time, the rate of methadone-related deaths decreased in the State, from 2.3 per 100,000 population in 1998 to 1.5 in 2002. There were 26 methadone-involved deaths reported in 2002, compared with 40 in 1998.

In slightly more than one-half (50.3 percent) of the deaths in which methadone was cited as a cause, illicit drugs were also identified. Of the decedents involving methadone and illicit drugs, the records show that 35.0 percent had used cocaine and 22.4 percent had used heroin. Approximately 23.8 percent of methadone-related deaths were also caused by prescription drugs, and 3.5 percent were also caused by alcohol. Methadone was reported as the only drug involved in less than one-quarter (22.4 percent) of the deaths.

Data on the source of the methadone were available for only 79 of the 143 decedents. Of these 79 decedents, 68 (86 percent) had received a prescription for methadone from a physician, and 31 were administered the drug in a methadone maintenance treatment program. Methadone had been prescribed to 27 decedents (34 percent) for management of pain.

[1]Shah, N.; Lathrop, S.L.; and Landen, M.G. (in press) Unintentional methadone-related overdose death in New Mexico (USA) and implications for surveillance, 1998–2002. *Addiction.*

Unintentional Prescription Drug Overdose Deaths in New Mexico

Laura Brown, M.D., M.P.H.

Findings from an analysis of data on unintentional prescription overdose deaths in New Mexico are briefly described below. The data for the analysis are from the State's Office of the Medical Investigator (OMI).

Objective of the Study

The study was designed to examine prescription drug overdose deaths in New Mexico, with specific focus on the medical, mental health, chronic pain, and substance abuse histories of involved cases.

Background

An estimated 70 million Americans suffer from chronic pain. Prescription drugs are involved in 70 percent of all drug-related deaths in the United States, including illicit and prescription drugs. Hospital admissions for narcotic pain medication abuse more than doubled in the Nation between 1992 and 2002. At the same time, clinicians have been and are being disciplined for undertreatment of pain, and pain management policies are being systematically examined in each State. The proportion of prescription drug-caused and drug-involved deaths in relation to all unintentional drug deaths (including illicit and prescription) increased in New Mexico from 2002 to 2003.

Study Methods

The study involved a retrospective chart review of 64 New Mexico OMI cases of unintentional prescription drug overdose death in 2002. Prescription drugs causing overdose included either ingested and/or injected drugs. The review was conducted between March and August 2004. While all deaths were classified as drug-caused, data collection included information about all drugs found by toxicology.

Results

The major findings are as follows:

- Fifty-five percent of the cases had a known history of chronic pain
- Forty-one percent of the cases had a known history of prescription drug abuse, with 22 percent having a known history of overdose
- Thirty-one percent of the cases had a known history of alcoholism
- Thirty-one percent of the cases had a history of illicit drug abuse, with 19 percent having a known history of injection drug abuse
- Sixty-one percent of the cases had a known history of depression, 36 percent had other types of mental illness, and 25 percent had known histories of anxiety
- 50 percent of the 64 cases were residents of Bernalillo County. The 64 decedents were somewhat more likely to be male and White, with an average age of 44 years, as shown in exhibit 1

Limitations

A major limitation of this study was that a large amount of medical chart data for the 64 cases was not available. Therefore, the estimates presented for clinical characteristics are conservative.

Exhibit 1. Demographic Characteristics of 64 Overdose Death Cases: 2002[1]

Demographic Characteristic	Number	Percent
Gender		
Male	35	55
Female	29	45
Race/Ethnicity		
White	46	72
Hispanic	16	25
American Indian	1	2
Black	1	2
Median Age	44 years	
Age Range	16–79	
County of Residence (Top 3 Most Frequent)		
Bernalillo	32	50
Luna, Santa Fe	4 each	6
Eddy	3	5

[1]Data are preliminary.
SOURCE: New Mexico Department of Health

Care And Treatment Of Drug Abusers in New Mexico

Drug-Related Hospitalizations in New Mexico—Hospital Inpatient Discharge Data

Ajoy Kumar, M.B.B.S, M.P.H., and Nina Shah, M.S.

In New Mexico, injury was the third leading cause of deaths after heart disease and malignancy in 2001. In the past 15 years, poisoning deaths have been rising in the State. In 1999, poisoning surpassed firearms to become the second leading cause of injury deaths (*see exhibit 1*). Poisoning death rates increased by 186 percent between 1981 and 2002. This paper provides information for non-fatal drug abuse hospitalizations in New Mexico's non-Federal hospitals.

Study Methods

The New Mexico Health Policy Commission (HPC) provided the Hospital Inpatient Discharge Data (HIDD) for the years 1998 to 2002 that were analyzed for this paper. This paper addresses discharges with drug abuse as the primary (first) diagnosis, or as the second—or the third—listed diagnosis, as recommended by National Institute on Drug Abuse (NIDA 1998). If a drug abuse category only appeared in the 4th through 9th diagnosis fields, the discharge was not included in this analysis. The drug diagnosis codes were selected from International Classification of Diseases, Ninth Revision-Clinical Modification (ICD-9-CM) using standard groups recommended by NIDA; these codes are listed in an *Addendum* to this paper.

The HIDD records have not been de-duplicated, so it is possible that there is more than one discharge for a single drug-related incident. Only the non-fatal discharges were studied; more complete death information is available from death certificate files. The limitation of the HIDD is that it does not include hospitalization data from Federal hospitals, such as Indian Health Service and the Veteran Administration (VA), since Federal hospitals are not required to submit their hospitalization data to the New Mexico Health Policy Commission.

Results

New Mexico had 8,957 non-fatal hospitalizations for selected drug abuse categories between 1998 and 2002. Most of the drug abuse hospitalizations were in secondary diagnosis fields rather than principal diagnosis fields (*see exhibit 2*). Leading findings are summarized below.

Overall Non-Fatal Drug Abuse Hospitalizations

- Mixed and unspecified drugs accounted for 36 percent of the hospitalizations (see ex*hibit 3*); this is a diverse category that includes the presence of multiple drugs, over-the-counter (OTC) drugs, and/or undetermined substances.

- Cocaine accounted for 35 percent of the hospitalizations (*see exhibit 3*).

- Mixed and unspecified drugs were most commonly found in the 0–17 and 55-and-older age groups, but cocaine was most commonly found in 18–54-year-olds.

- One-third of the discharges who were 65 and older used codeine, meperidine, barbiturates, or other sedatives.

- Opioids and opiates, at 42 percent, were the most common drug abuse primary diagnosis (*see exhibit 4*).

- The top three primary diagnoses of hospitalization when the second diagnosis was drug abuse were…
  - ✓ Mental disorder (55 percent)
  - ✓ Injury (11 percent)
  - ✓ Complications of pregnancy and childbirth (10 percent).

- The top three primary diagnoses of hospitalization when the third diagnosis was drug abuse were…
  - ✓ Mental disorder (43 percent)
  - ✓ Injury (16 percent)
  - ✓ Digestive diseases (8 percent).

Non-Fatal Drug Abuse Hospitalizations by Gender, Age, and Race/Ethnicity

- Drug abuse hospitalizations were higher in males than in females (54 vs. 46 percent) (*see exhibit 5*).

- Drug abuse hospitalizations increased with age until age 44, after which hospitalizations dropped sharply.

- Persons age 26–44 accounted for 50 percent of all drug abuse hospitalizations. Those age 26–34 had the highest drug abuse hospitalization rate, at

928 per 100,000 population, followed by those age 35–44, at 912 per 100,000 population (*see exhibit 6)*.

- Persons age 65 and older had the lowest drug abuse hospitalization rate (86 per 100,000 population).

- Hispanics accounted for 43 percent of all drug abuse hospitalizations, followed by non-Hispanic Whites (35 percent) (*see exhibit 7*).

Trends in Non-Fatal Drug Abuse Hospitalizations

- From 1998 to 2002, drug abuse-related non-fatal hospitalizations increased 57 percent, from 77 hospitalizations per 100,000 to 121 per 100,000 population (*see exhibit 8*)

- Amphetamines, mixed and unspecified drugs, and cocaine-related hospitalizations increased 188, 55, and 53 percent, respectively, between 1998 and 2002 (*see exhibit* 9).

Conclusions

- Overall drug abuse hospitalizations have been rising in New Mexico.

- The pattern of drug abuse hospitalizations has been one of increases up to age 44, followed by a sharp decline in older age groups.

- More than one-third of drug abuse discharges involved cocaine use.

- Less than 20 percent of the discharges had drug abuse as the primary cause of hospitalization.

- Mental disorder was the most common first diagnosis when drug abuse was the second or third diagnosis.

Acknowledgements

The authors would like to thank the New Mexico Health Policy Commission for providing Hospital Inpatient Discharge Data for this presentation. We appreciate Barbara Chatterjee, Program Manager, Injury Epidemiology Unit, Office of Injury Prevention, New Mexico Department of Health, for her suggestions on this presentation.

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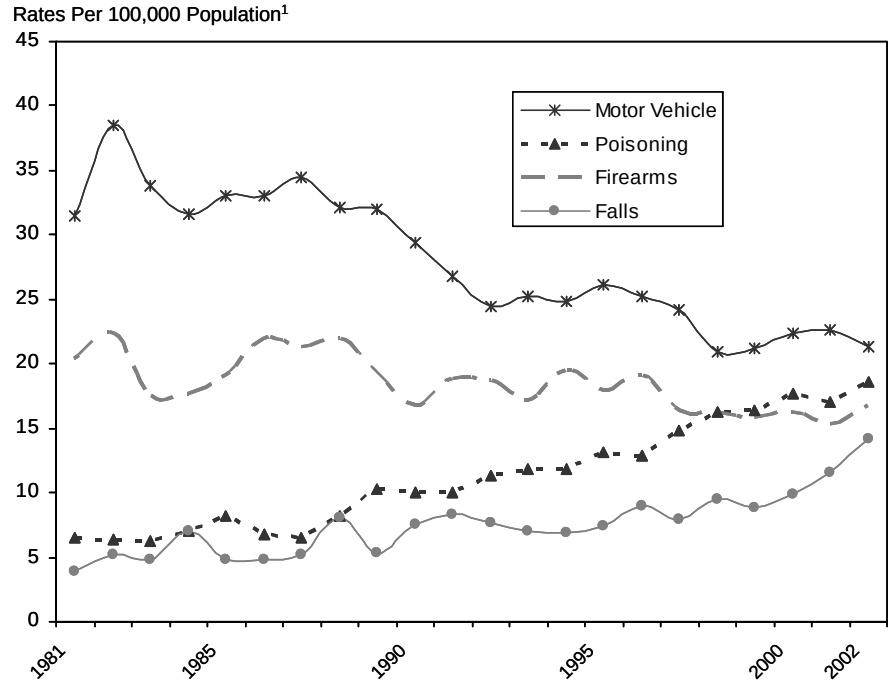
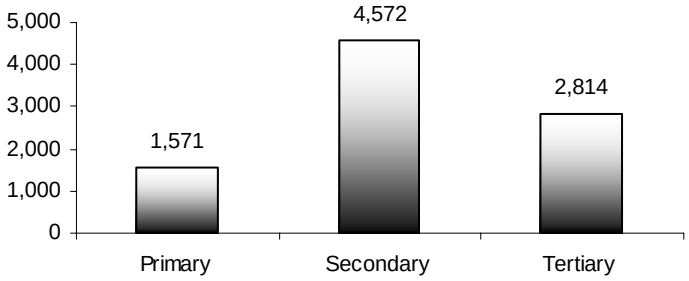
National Institute on Drug Abuse. *Assessing Drug Abuse Within and Across Communities, Drug-Related ICD-9-CM Diagnoses and Diagnostic Related Groups* <http://www.drugabuse.gov/DEPR/Assessing/Guide9.html#Issue>.

Exhibit 1. Rates Per 100,000 Population for the 4 Leading Causes of Injury Deaths Among New Mexico Residents: 1981–2002



[1]Age-adjusted rate.
SOURCES: CDC, WISQARS (1981–1998); Office of New Mexico Vital Record & Health Statistics (1999–2002)

Exhibit 2. Numbers of Non-Fatal Illicit Drug Abuse Hospitalizations of New Mexico Residents by First, Second, and Third Diagnosis: 1998–2002[1]



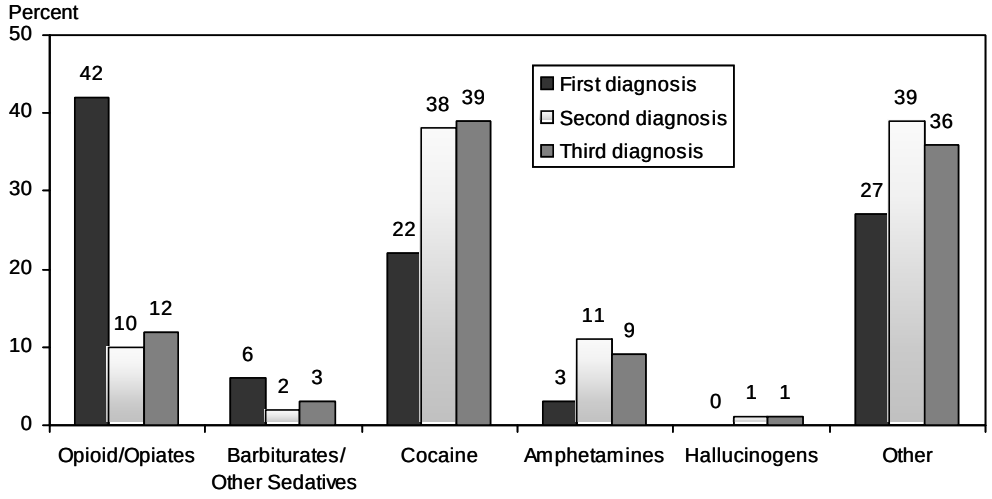
[1]*N*=8,957 in first through third diagnosis fields.
SOURCE: New Mexico Health Policy Commission

Exhibit 3. Non-Fatal Hospitalizations Among New Mexico Residents, by Specific Drug (First–Third Diagnosis): 1998–2002

Drug Categories	Number	Percent
Opium	126	1.4
Heroin	184	2.1
Methadone	89	1.0
Other (Codeine, Meperidine, etc.)	324	3.6
Opioid	720	8.0
Barbiturate/Other Sedatives	291	3.2
Mixed and Unspecified[1]	3,225	36.0
Cocaine	3,165	35.3
Amphetamine	789	8.8
Hallucinogen	44	0.5
Total	8,957	100

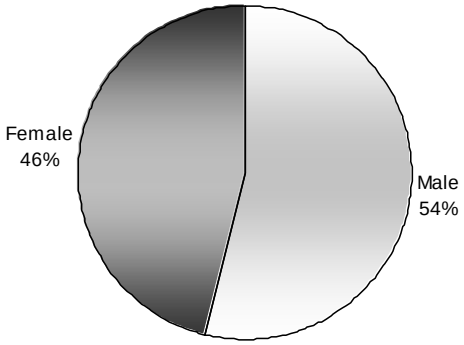
[1]Mixed and unspecified includes mixed, over-the-counter (OTC), and unspecified drug abuse, etc.
SOURCE: New Mexico Health Policy Commission

Exhibit 4. Non-Fatal Hospitalizations by Specific Categories of Illicit Drug Abuse Among New Mexico Residents, by Percent: 1998–2002[1]



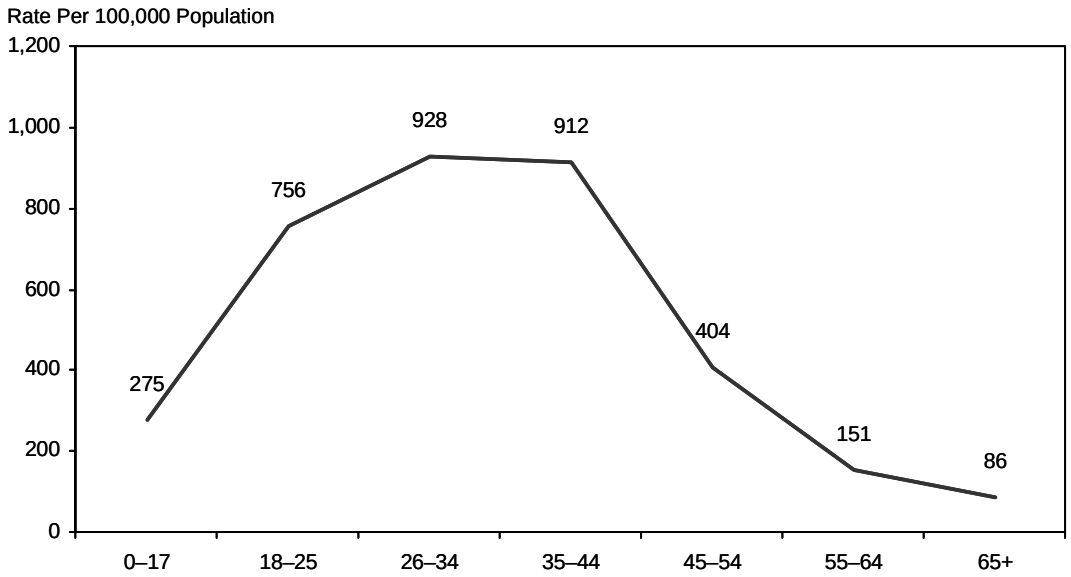
[1]*N*=8,957 in first through third diagnosis fields.
[2]Opioid mixed, nondependent, opium, other drugs (codeine, meperidine, etc), heroin, and methadone.
[3]Includes other mixed, unspecified drug ("Laxative habit," misuse of drugs NOS, and nonprescribed use of drugs/patent medicinal).
SOURCE: New Mexico Health Policy Commission

Exhibit 5. Non-Fatal Illicit Drug Abuse Hospitalizations of New Mexico Residents, by Gender: 1998–2002[1]



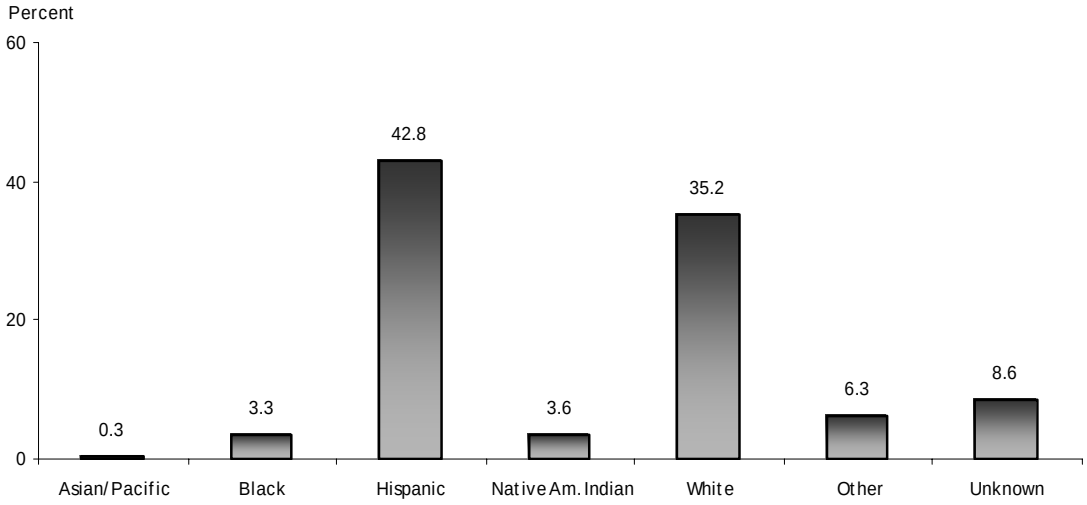
[1]*N*=8,957 in first through third diagnosis fields.
SOURCE: New Mexico Health Policy Commission

Exhibit 6. Rates Per 100,000 Population of Non-Fatal Illicit Drug Abuse Hospitalizations of New Mexico Residents, by Age: 1998–2002[1]



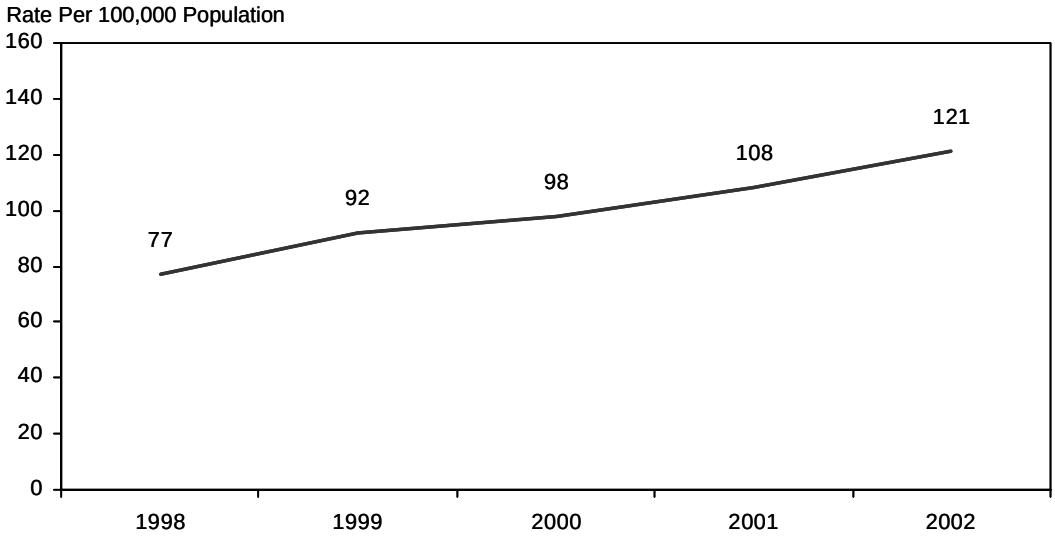
[1]*N*=8,957 in first through third diagnosis fields.
SOURCE: New Mexico Health Policy Commission

Exhibit 7. Non-Fatal Illicit Drug Abuse Hospitalizations[1] of New Mexico Residents, by Race/Ethnicity and Percent: 1998–2002



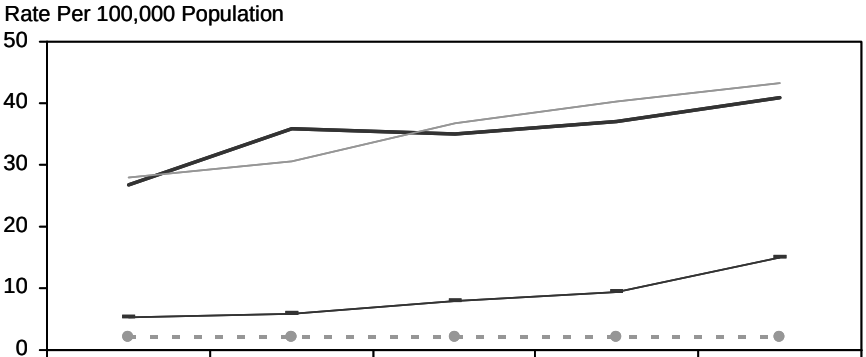
[1]*N*=8,957 in first through third diagnosis fields.
SOURCE: New Mexico Health Policy Commission

Exhibit 8. Rates Per 100,000 Population for Non-Fatal Illicit Drug Hospitalizations[1] of New Mexico Residents: 1998–2002



[1]Covers first through third diagnosis fields.
SOURCE: New Mexico Health Policy Commission

Exhibit 9. Rates Per 100,000 Population of Non-Fatal Amphetamine, Cocaine, Heroin, and Other[1] Drug Hospitalizations of New Mexico Residents: 1998–2002



	1998	1999	2000	2001	2002
Cocaine	26.7	36.0	35.0	37.2	40.8
Amphetamine	5.2	5.9	8.0	9.3	15.0
Heroin	2.0	2.0	2.1	2.1	2.0
Other[1]	27.9	30.5	36.9	40.2	43.3

[1]Other includes mixed, over-the-counter (OTC), and unspecified drug abuse, etc.
SOURCE: New Mexico Health Policy Commission

Addendum: Selected Codes from the International Classification of Diseases, 9th Revision

Amphetamine; nondependent	305.7
Barbiturate/sedative/hypnotic; nondependent	305.4, 967.0
Cocaine/poisoning by topical local anesthetics infiltration	305.6, 968.5
Hallucinogen; nondependent	305.3
Heroin	965.01
Methadone	965.02
Opioid-mixed; nondependent	305.5
Opium	965.00
Other drugs (codeine, meperidine, etc.)	965.09
Mixed and unspecified[1] drug; nondependent	305.9

[1]Mixed and unspecified includes mixed, over-the-counter (OTC), and unspecified drug abuse.
SOURCE: NIDA code selection for drug abuse

New Mexico's Treatment Episode Data Set: Selected Findings on Adult Substance Abuse Admissions

Brian Woods

This analysis examines the State's Treatment Episode Data Set (TEDS) primary drugs of abuse and demographic characteristics among persons admitted to participating providers of substance abuse treatment from January 2001 through December 2003.

The TEDS System

The TEDS database includes the Minimum Data Set[1] items required by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA). The data are reported annually to SAMHSA as part of the national effort to document information on admissions to publicly funded substance abuse treatment.

The Minimum Data Set includes the following information on each admission:

- Demographic data (age, gender, race/ethnicity)
- Primary, secondary, and tertiary substances used by persons at the time of admission, the route of drug administration, the frequency of use, and the age of first substance use
- Source of referral to treatment
- Number of prior treatment episodes
- Service type, including planned use of methadone

Data come from the State's Behavioral Health Information System. Some limitations are…

- The information is not collected directly from individuals receiving treatment services. Treatment service data are submitted by service providers to Regional Care Coordinators (RCCs) for payment. RCC's then submit data quarterly to the State Department of Health for reimbursements, which is how the system tracks admissions. Tracking reimbursements may result in less accurate data than if tracked from point of service for the individual.
- The data do not include all admissions to substance abuse treatment (e.g., data from private, HMO, or MCO insurers, or Medicaid). Also, facilities operated by Federal agencies (e.g., Bureau of Prisons, Department of Defense, Veterans Administration) are not included, though some Indian Health Services programs are included. There is no attempt to include early intervention programs in the system.
- The current relational database (RDB) system replaced an earlier system, and little historical data were transferred. The system is admission-based, so there may be serial admissions over time per individual. Another table in the RDB has roughly 1.5 million service charges, roughly 30 service charges per treatment, and sometimes no services charges when services were not provided, even though an individual was eligible and admitted.
- Data are updated and changed over time because of retrospective updates/revisions by data warehouse administrators.

Selected Data from the New Mexico TEDS

The findings presented here are for persons age 18 and older admitted for treatment for substance abuse or mental health with substance abuse co-morbidities from 2001 to 2003. Data were selected from 47,072 admissions documented from July 1998 through May 2004 and including 528 persons less than 18 years in age. Admissions prior to 2001 and after 2003 were excluded because of data inconsistencies related to start-up, partial import, and reporting lags. There were 7,360, 6,514, and 6,389 treatment admissions for the years 2001, 2002, and 2003, respectively, a total of 20,263 admissions. The mean number of admissions was 563 per month over the 36-month period, with some indication of an overall downward trend and some seasonality (to be investigated in the future).

During the 36-month time period, 52 percent of admissions reported alcohol as their primary substance of abuse (*exhibit 1*). No primary drug of abuse was documented for 22 percent of the admissions, although "admit type" indicated substance abuse.

[1]All States collect information for the Minimum Data Set. Some States collect information for a Discharge Data Set and a Supplemental Data Set.

Heroin or other narcotics, cocaine, marijuana, and methamphetamine accounted for another 25 percent of admissions. The remaining 1 percent included hallucinogens and other substances.

As shown in exhibit 2, the proportions of primary alcohol admissions increased a small proportion over the years, rising from 50 percent in 2001 to 52 percent by 2003. The proportions reporting heroin as their primary drug of abuse remained similarly stable, showing some slight increase from 2001 to 2002 (8 to 9 percent) and back down in 2003 (8 percent). The proportions reporting cocaine as their primary drug of abuse remained low, but did increase from 6 to 7 percent from 2001 to 2003. Marijuana continued to be a primary drug of abuse for relatively few admissions (7, 5, and 7 percent) over the time periods shown in exhibit 2.

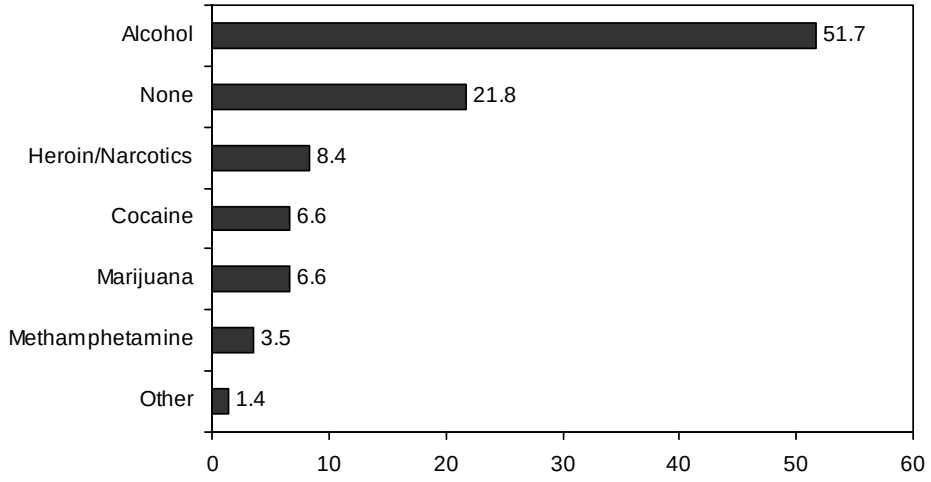
Primary alcohol-only admissions accounted for 51.7 percent of all admissions in New Mexico for the years 2001 through 2003, compared with 26 percent nationwide. With regard to alcohol abuse in any of the primary, secondary, or tertiary categories of substance abuse, 59.7 percent of treatment admissions in New Mexico reported abusing alcohol at the time of intake. Admissions to treatment for only alcohol abuse and no other substance during this same period were 32.9 percent.

Analysis by gender shows that males were noticeably more likely than females to report alcohol as their primary drug of abuse for years 2001 through 2003—55 versus 46 percent (*exhibit 3*). While gender differences for other drugs were not as substantial, females were proportionately more likely than males to report methamphetamine, heroin, or cocaine as their primary drug of abuse, while males were slightly more likely to be primary marijuana abusers.

Males were proportionately more likely than females to have been referred to treatment by the legal system (31 vs. 16 percent), while females were slightly more likely to have been referred to treatment by the "community" (30 vs. 21 percent) or self-referred (31 vs. 24 percent) *(exhibit 4*). "Community" in this case includes family, friends, schools, shelters, and health care providers. The Other and Unknown category includes other uncategorized, unreported referrals, and a 1 percent occurrence of employer/co-worker referral.

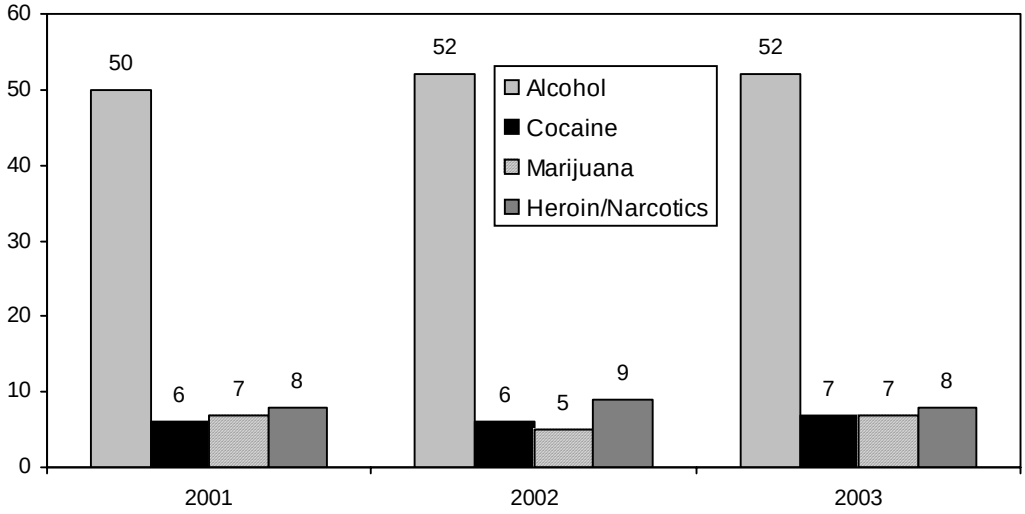
Referral to treatment for alcohol abuse was predominately by the legal system (37 percent) (*exhibit 5*), as might be expected from the observations that males were more likely to be referred to treatment by some element of the legal system and more likely to be admitted primarily for alcohol abuse (*see exhibits 3 and 4*). More than one-half of referrals for alcohol abuse were either by self or community referral (28.8 percent self and 27.0 percent community referral). For marijuana abuse referrals, nearly 60 percent came from self or community referral (32.9 percent self and 28.7 percent community referral). Referral to treatment for marijuana was less often from the legal system than self and community. The same was observed for cocaine, heroin or other narcotics, and methamphetamine where self and community referral were the majority referral sources. The two sources accounted for the majority of referrals to treatment—84.8 percent (40.5 and 44.3 percent, respectively, for self and community referral) (*exhibit 5*).

Exhibit 1. Adult Admissions to Treatment in New Mexico, by Primary Substance of Abuse and Percent: January 2001–December 2003



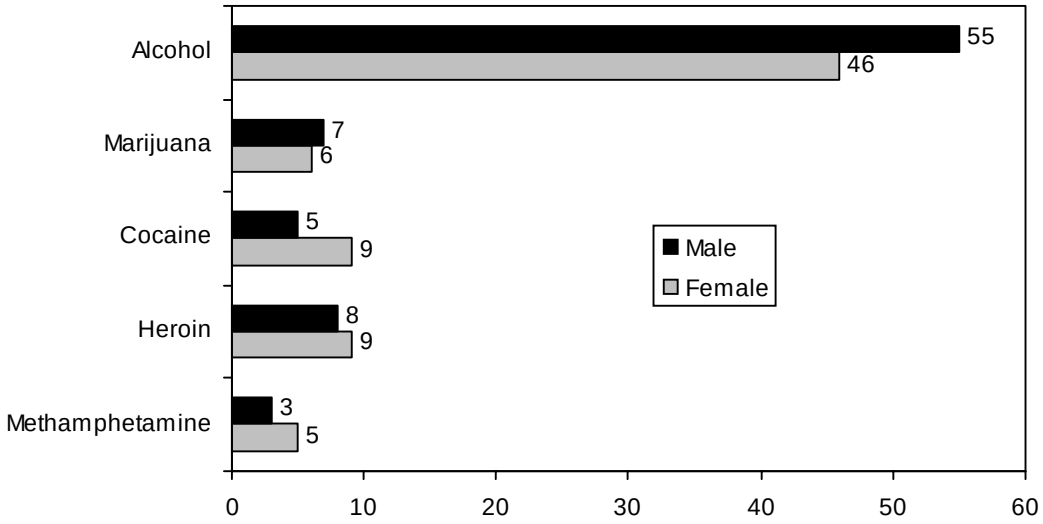
SOURCE: TEDS, New Mexico Department of Health

Exhibit 2. Adult Treatment Admissions by Primary Substance of Abuse, Year, and Percent: January 2001–December 2003



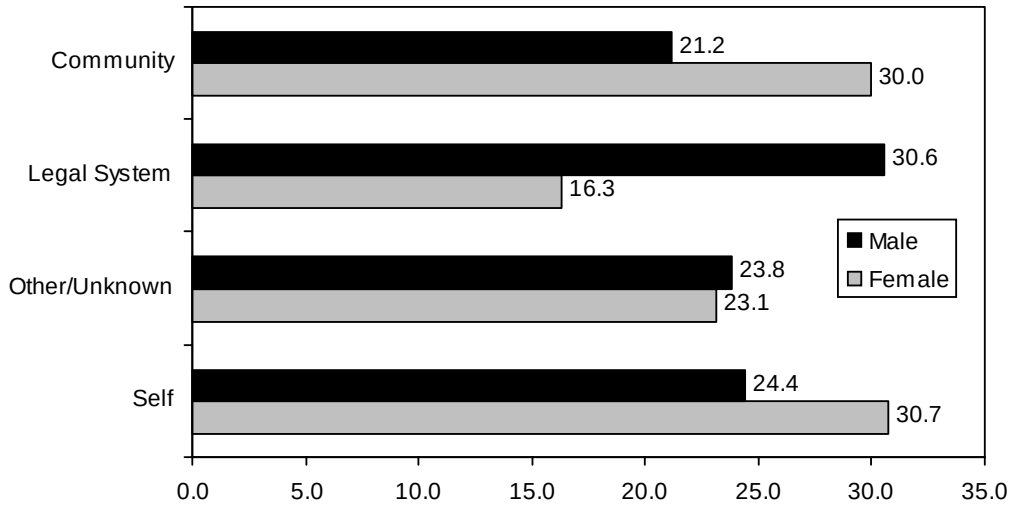
SOURCE: TEDS, New Mexico Department of Health

Exhibit 3. Primary Substance of Abuse Among Treatment Admissions, by Gender and Percent: January 2001–December 2003



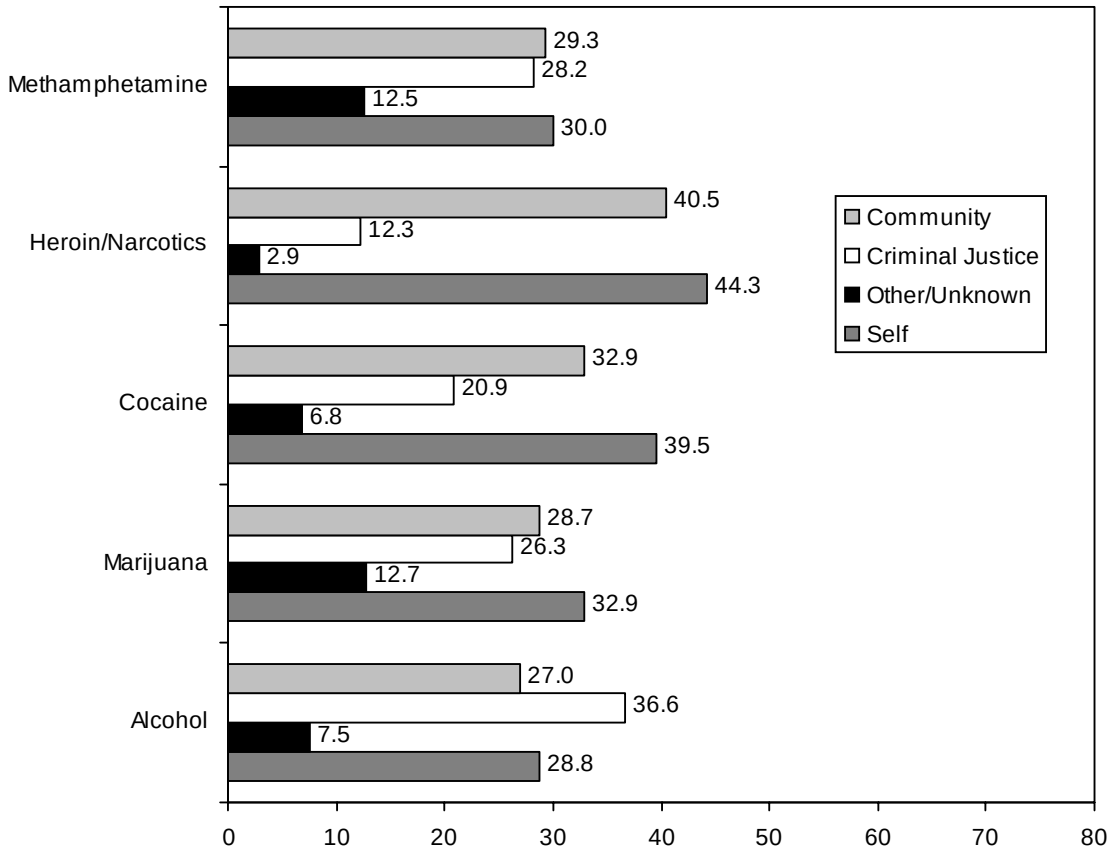
SOURCE: TEDS, New Mexico Department of Health

Exhibit 4. Source of Referral to Substance Abuse Treatment Admissions, by Gender and Percent: January 2001–December 2003



SOURCE: TEDS, New Mexico Department of Health

Exhibit 5. Primary Substance of Abuse by Source of Referral of Treatment Admissions and Percent: January 2001–December 2003



SOURCE: TEDS, New Mexico Department of Health

Harm Reduction Activities in New Mexico

Phillip Fiuty and Jeanne Block, B.S.N., M.S.

Background

In recent years, two New Mexico legislative acts have contributed to interventions that reduce health risks among the State's injection drug user (IDU) population and their significant others…

- The New Mexico Harm Reduction Act of 1997, which mandates that the New Mexico Department of Health (DOH)…
  - Establish a syringe exchange program
  - Compile data to assist in planning and evaluation efforts to combat the spread of blood-borne diseases.

- The Authorization to Administer An Opioid Antagonist: Release From Liability Act of 2000, which protects a health care worker or other person who, in good faith and with reasonable care, administers an opioid antagonist to someone they believe is experiencing a heroin overdose

Need for Harm Reduction Programs

The association between needle sharing and HIV/AIDS as well as hepatitis B and C is well established. A primary goal of New Mexico's Syringe Exchange Program (SEP) is to reduce needle sharing. Needle exchange programs accomplish this goal, as concluded by a University of California report documenting that 10 of 14 credible studies of needle exchange programs have demonstrated a reduction of needle sharing frequency.

Prior to the New Mexico Harm Reduction Act of 1997, a 1994–1997 street-based seroprevalence study of 1,003 IDUs in the State found that 0.5 percent were HIV-positive, 61 percent were positive for hepatitis B, and 82 percent were positive for hepatitis C.

The New Mexico Office of Epidemiology estimates that there are 23,000 adult IDUs in the State. In June 2004, there were 214 persons statewide who were living with HIV and identified injection drug use as their primary risk factor. If this number is correct, there are still less than 1 percent of IDUs who are HIV-infected. An individual case of HIV can cost as much as $10,000–$15,000 per year just for medications.

It is also estimated that 60–80 percent of new injectors become infected with hepatitis C in their first year of injecting. A full course of treatment for hepatitis C can cost between $15,000 and $30,000 per year just for medications.

In contrast to the thousands of dollars for medications to treat HIV and hepatitis C, a new syringe costs 9 cents.

New Mexico's Harm Reduction Programs

The State has initiated both a Syringe Exchange Program and training in the use of the opioid antagonist, Naloxone, at various sites. These harm reduction sites also provide…

- Free screening and vaccine services

- STD, family planning, and a variety of medical, social, and mental health services

- Assistance in accessing drug abuse treatment services

New Mexico's SEP

The first SEPs in New Mexico became operational in 1998. Currently, there are 26 SEPs statewide, with 7 being in Albuquerque and 2 in the Espanola Valley.

Since becoming operational, SEPs have accomplished the following:

- Enrolled 8,033 IDUs statewide, with 4,000 being "active" participants

- Exchanged more than five million needles

- Achieved a 96 percent collection rate

Methadone maintenance clinics have played a significant role in the achievement of SEP goals.

January 2003 data from a re-survey of 732 (12 percent) of SEP participants showed that…

- Before SEP enrollment, 154 (21 percent) had shared a syringe with another person 3 or more times in the prior week. After being in the program, 64 percent indicated a decreased in syringe sharing (with decreases ranging from zero to 90 percent of the 732 participants).

- Twenty-eight percent indicated they were currently in some type of treatment.

- Fifteen percent reported that contact with the SEP helped them obtain treatment.

- Twenty-eight percent of all new participants said they tried but were unable to get treatment in the past. Reasons included…
  - The waiting list was too long
  - Treatment was not affordable
  - Failed to meet admissions criteria
  - Did not know where to go
  - Family problems
  - Could not afford to take time off from work.

Naloxone Program Component

Since August 2001, 647 people have been trained and prescribed Naloxone: 349 in Albuquerque, 300 in Espanola and Arriba Counties, and 10 in Las Cruces. The results of this effort include…

- More than 100 refills have been provided.

- Ninety-eight persons reported successful use of Naloxone.

- Three reported using the rescue breathing learned in training.

- One reported calling 911.

There have not been any negative reports related to the use of Naloxone. Rescue breathing has been commonly used. Notification of emergency medical services (EMS) remains low—5 of 18 reported uses of Naloxone, based on an initial analysis.

It is recommended that the following efforts be taken:

- Increased access to treatment, including methadone and buprenorphine, and office-based treatment by physicians

- Aggressive case management that utilizes the SEPs, inpatient and outpatient treatment programs, and prisons

- Initiation of nonfatal overdose training

- Training and equipping of State Police with intranasal Naloxone

- Training and equipping of other first responders

Ethnography of Drug Use and Barriers to Care in the Española Valley of New Mexico

Cathleen E. Willging, Ph.D., Michael Trujillo, and W. Azul La Luz, Ph.D.

Introduction

An ethnographic study, based on participant observation and in-depth interviews, was conducted between April 2003 and June 2003 in the Española Valley of New Mexico to understand substance use patterns and utilization of behavioral health services from the perspective of residents with drug use histories. The Española Valley straddles the borders of Rio Arriba and Santa Fe Counties, an area noted for extremely high overdose death rates.

Methods

Three ethnographic research techniques, each designed to check and complement the others, were used in the study: (1) participant observation, (2) unstructured interviews, and (3) semi-structured interviews.

Participant observation took place in harm-reduction and treatment settings. These settings…

- Provided opportunities to ascertain the range of behavioral health services available to persons with drug use problems
- Permitted access to key informants, such as administrators, providers, and clients, for unstructured and semistructured interviews.

The onsite observations focused on service delivery processes. Researchers also participated in…

- Group treatment based on Twelve Step fellowship modalities
- Needle exchange in community settings
- Social gatherings involving drug users and/or their families outside treatment settings.

Unstructured interviews were conducted with a total of 35 behavioral health providers, law enforcement and criminal justice officials, drug users, and community members. The purpose of these preliminary interviews was to obtain background information that would inform the design of structured data collection instruments.

Data from the participant observations and the unstructured interviews were used to create two sets of questions for semistructured interviews with current and former drug users. The instruments were designed to allow informants the freedom to add answers and address themes not anticipated in the sets of prepared questions. Eight pilot tests were conducted prior to study implementation.

Semistructured interviews by the researchers began upon completion of the pilot tests. Of the 47 current and former drug-using informants who were interviewed…

- Twenty-eight were male and 19 were female.
- Their ages ranged between 20 and 59 (the mean and median ages were both 36.5).
- Thirty-eight were Hispanic or Latino only; five were White, non-Latino; two were Hispanic or Latino; one was Native American; and one was Asian and Native American.
- Nineteen were classified as current drug users, although many of these individuals were currently participating in drug treatment or methadone maintenance programs.
- Twenty-eight were classified as former drug users.
- Twenty of the current and former drug users were in methadone maintenance programs.

Data analysis proceeded through a series of iterative readings, followed by a systematic line-by-line categorization of data into more than 200 codes. The coding process contributed to the identification of several themes that were repeated often in the data or that represented unusual or particular ideas and concerns. Through multiple readings of the data and discussions among research team members, several themes and issues that recurred in the data were identified.

Findings

As reported by the 47 informants…

- The most widely used substances in the Española Valley include alcohol, marijuana, heroin, cocaine, and prescription drugs.

- Polysubstance use is quite common.

- Drug use is characterized as an intergenerational and multigenerational phenomenon. Initial exposure to alcohol and drug use is often traced directly to an individual's social support networks.

- Within the social networks, substances classified as illicit and those taken under the direction of a medical authority are not necessarily perceived as posing the same harmful threats to users.

- Alcohol and marijuana use are normalized, routine aspects of daily living, as is the practice of self-medicating with prescription drugs. People describe themselves as "clean" despite consuming such substances regularly or occasionally.

- Overdoses are familiar occurrences for the drug-using population.

Many overdoses never come to the attention of the health care system or the legal authorities, as they are "handled at home" by family and friends. When persons who present for an overdose fear that medical and legal intervention is imminent, they may leave the scene to protect themselves from being identified by health care providers and law enforcement officials as drug users. They fear the consequences of being identified, which can include exposure, imprisonment, and, for parents, forced separation from children. Local explanations for overdoses include unfamiliarity with quantity and quality of drug, time lapse in obtaining assistance, "fixing" alone, and suicide.

Co-morbid conditions influence decisions to use drugs and subsequent help-seeking behaviors. The unmet mental health needs of drug users and their social supports are substantial. Exposure to traumatic events (including death, physical abuse, and sexual abuse) abounds within the drug-using population and may increase risks for depression, anxiety, and post-traumatic stress disorder. The pursuit of mental health care, however, is not typically part of the help-seeking processes of drug users in the Española Valley. Reluctance to access such care may relate to the social stigma of mental illness and the overall lack of services.

Drug users also complain of chronic, debilitating physical health problems that underlie their decisions to use illicit drugs (above all heroin) and prescription medications, usually in combination. Persons with a history of drug use, their social support networks, and members of the community often consider prescription medications to be safe to consume because a medical authority has prescribed them. Misuse of such medications in attempts to curtail "pain" (psychological and physical) can facilitate entry into illicit drug and alcohol use, intensify use over time, and provide a transition to pain-relieving drugs, such as heroin.

Seeking help for substance use problems is a complex process mediated by an individual's social support networks, access to behavioral health resources, and broader social contexts. This process unfolds over several years and typically involves cycles of sobriety and relapse. Social support networks are critical to help-seeking, as they enable drug use or, conversely, motivate drug users to obtain services while imparting emotional and financial assistance.

The structure of behavioral health care and attendant support services in the region is perceived as lacking capacity to meet the treatment needs of the drug-using population. There are no detoxification facilities for drug users, and the waiting lists for admission into facilities elsewhere in the State are lengthy, including those for residential treatment. Drug users emphasize intense struggles of avoiding drugs and alcohol when on these lists. Everyday problems that impact access to services include cost, insurance, transportation, and child care.

Many people enter the behavioral health care system for reasons other than ending drug use (i.e., to "rest" from drug use or to moderate drug use). The criminal justice system is a major pathway into this system. Some people describe early recovery efforts as "faking it." Treatment experiences are generally cast in terms of clients who want to succeed and clients who do not want to succeed. Awareness that clients are still using can adversely impact the treatment experiences of fellow clients. Persons in treatment for reasons other than ending drug use eventually profit from such experiences and learn to avoid the influence of clients who are "faking it." Group camaraderie among clients is overwhelmingly seen as a facilitator to recovery, as is access to qualified counselors who are former users as well as non-judgmental listeners.

The continuum of care in the Española Valley is fragmented. Persons re-entering community settings after periods of absence while they were in residential treatment or incarcerated lack access to aftercare services to forestall relapse and prevent unintentional overdose. Such services include housing, education, and employment assistance.

While access to outpatient services is greater in comparison to residential treatment, the recipients of such services claim they are more likely to engage in ongoing drug use activity because of the "free time" afforded to them. Twelve Step Fellowships offer alternatives to social support networks where drug and alcohol use occurs. However, persons seeking to discontinue drug use lament the lack of peer resources, including consistent access to fellowship meetings.

Conclusion

The study suggests that drug use and help-seeking processes are not solitary practices engaged in by individuals, but instead they involve a range of community, organizational, familial, and interpersonal factors. This range should be taken into consideration when planning and implementing drug use prevention and intervention efforts for the Española Valley.

Reference

Willging, C.E.; Trujillo, M.; and La Luz, W.A. (February 20, 2004). Ethnography of drug use and barriers to care in the Española Valley of New Mexico. *New Mexico Epidemiology Report, Volume 2004, No. 3.* Albuquerque, NM: New Mexico Department of Health.

Drug Abusers And The Criminal Justice System

Drug Use Among Arrestees in Rio Arriba County, New Mexico

Russell Winn, Ph.D.

This paper presents preliminary findings from a 3-year study of adult male arrestees in Rio Arriba County, New Mexico. The study was conducted by a research team from New Mexico State University's Department of Government under a contract from the Office of Epidemiology, New Mexico Department of Health.

Rio Arriba County, located northwest of Santa Fe, is largely rural and has a total county population just over 40,000. The largest town in the county, Espanola, has a population of about 10,000. The county is perhaps best known as the home of the painter Georgia O'Keefe. The topography ranges from desert river valley to alpine peaks. The county also has the highest drug overdose death rate of any county in the United States. In 2000, the overdose death rate in Rio Arriba County was more than 50 per 100,000 population, or 10 times the national rate.

Study Methods

From June 2002 to July 2004, the research team interviewed new arrestees on eight different occasions (quarters). Interviews were held at the two detention facilities in Rio Arriba County. To be eligible for the study, the arrestee must have been an adult male who had been charged with a crime; this excluded "holds" for another jurisdiction, "detoxes," and those serving a jail sentence. The arrestee must have been in custody less than 48 hours and also agreed to be interviewed. During each quarter, the research team tried to interview every eligible arrestee who was booked into either of the jails during a 14-day period. As part of the interviews, urine samples were collected and sent to a lab for drug testing. Three survey instruments were administered to each participant:

- The ADAM (Arrestee Drug Abuse Monitoring program) instrument focused on demographic characteristics, law enforcement and treatment experience, drug use and purchases, and drug dependence and abuse; the protocol also included a urinalysis drug test.

- The Mental Health instrument focused on feelings of depression, stress, and suicidal ideation or attempt.

- The CSAT (Center for Substance Abuse Treatment) instrument focused on demographic characteristics, treatment experiences, and screening for cocaine and heroin use. Because of delays in getting approval to use this instrument from the Office of Management and Budget, this instrument was used in only five of the eight data collection quarters.

All totaled, 506 male arrestees were eligible for the study. However, only 396 were available, primarily because some arrestees were released from jail before they were approached[1] or because an arrestee was too ill or violent to be interviewed. Of the 396 who were available, 336 agreed to participate. Some of these were later excluded, most often because they had actually been held for more than 48 hours. Some individuals declined the interview part-way through, and others refused or were unable to provide a urine sample at the conclusion of the interview. The final sample was comprised of 286 arrestees who completed the ADAM interview and provided a usable urine sample. A total of 283 of these individuals also completed the Mental Health questionnaire. During the five quarters that the CSAT instrument was used, a total of 179 individuals also completed this survey.

ADAM Study Findings

Demographics

As shown in exhibit 1, arrestees were typically younger than 30, with less than one-fifth being older than 40. Fifty-six percent were Hispanic,[2] 24 percent were White, 16 percent were Native American, and the remaining 4 percent were Black or persons of mixed ethnicity. Thirty-eight percent had a high school education, and one-fifth of those did not complete the ninth grade. Thirty-five percent were unemployed, with most of the rest being employed full-time (43 percent) or part-time (9 percent). Family income was low, with more than three-quarters having a total family income of less than $25,000 per year and 29 percent reporting an annual income of less than $10,000. The majority of arrestees (78 percent) were

[1] At each facility, researchers conducted interviews during an 8-hour shift each day. A number of arrestees were booked and released during the 16 hours researchers were not at the facility.

[2] The 56 percent figure reflects a very conservative estimate of the actual percentage of Hispanics in this sample. The ADAM instrument does not provide a choice "Hispanic" to the question about race. To be counted as "Hispanic," the individual would have to refuse to classify themselves as any one of the listed races and volunteer that they were "Hispanic." Another question on the ADAM survey specifically asks respondents if they are Hispanic. Nearly 90 percent of the sample identified themselves as Hispanic on that question.

charged with a misdemeanor, and slightly more than one-fifth were charged with a felony.

Drug Use

The ADAM questionnaire asks arrestees if they have *ever* had five or more drinks in the same day or used marijuana, crack, powder cocaine, heroin, methamphetamine, or other illegal drugs. Information was also collected on age of first use of these drugs and whether any of these drugs had been used in the past 12 months.

As seen exhibit 2, 91 percent of the arrestees reported that they had five or more drinks on the same day some time in their lives, and 80 percent had done so in the past year. More than three-quarters (77 percent) reported ever using marijuana, and 52 percent had done so in the past year. More than one-third (39 percent) reported ever using crack cocaine, and nearly one-quarter (23 percent) had done so in the past year. More than one-half (57 percent) of the arrestees reported ever using powder cocaine, and slightly more than one-third (34 percent) had done so in the past year. Heroin use was reported by 35 percent of the arrestees, and one-quarter had used it in the past year. Methamphetamine had been used by 18 percent of the arrestees, with 5 percent using in the past year. Nearly one-third (32 percent) reported use of other illegal drugs sometime in their lives, with 18 percent using in the past year. The most common type of other illegal drug was a hallucinogen (either mushrooms or lysergic acid diethylamide [LSD]), which had been used by 39 of the 101 arrestees who specified a type of "other drug used."

Another section of the ADAM questionnaire asks about drug use in the past 3 days. In response to that section, 68 individuals reported they had used at least 1 painkiller in the 3 days prior to arrest, and 40 percent of this group (n=27) used painkillers without a prescription. Overall, 91 percent of the arrestees reported use of some illegal drug in the previous 12 months. Of those who had used illegal drugs in the past year, 39 percent reported injecting themselves with an illegal drug in the past year.

The youngest average age of first use (between 14 and 16) was for those using marijuana and those reporting having five or more drinks a day. On average, first use of other illegal drugs and heroin occurred at age 19–20. Use of cocaine (either crack or powder) and methamphetamines started, on average, when the arrestee was in his early twenties (20–22).

Exhibit 3 below shows the percentage of arrestees who tested positive for the five most common illegal drugs. Positive tests were likely to occur if the arrestee had consumed the drug within the last 3–5 days. The most commonly detected drug in Rio Arriba County was marijuana, which was detected in nearly one-half of the cases (46 percent, or 130 individuals). Cocaine was found in 41 percent (116 individuals), and opiates were found in nearly one-quarter (24 percent, or 68 individuals) of the cases.

There was general agreement between the lab test results and self-reported past-month drug usage. Of the men who tested positive for marijuana, 27 percent (34 individuals) said that they had not used the drug in the past month. Thirty individuals claimed to have used marijuana in the past 30 days, but they did not test positive for it.[3] Overall, test results matched self-report in 77 percent of the cases. Twelve percent of those tested had positive lab results but claimed they had not used marijuana in the past month.

Of the men who tested positive for cocaine, either rock or power, 39 percent (44 individuals) said they had not used the drug in the past month. Twenty individuals claimed to have used the drug in the past 30 days but did not test positive. Overall, test results matched self-report in 77 percent of the cases. Sixteen percent of those tested had positive lab results but claimed that they had not used any form of cocaine during the past month.

Of the men who tested positive for heroin, 31 percent (20 individuals) said they had not used the drug in the past month. Fourteen individuals claimed to have used heroin in the past 30 days but did not test positive. Overall, test results matched self-report in 88 percent of the cases. Seven percent of those tested had positive lab results but claimed they had not used heroin in the past month.

Comparison with Other Jurisdictions

Exhibit 3 also shows a comparison between Rio Arriba County and the ADAM sites in Albuquerque, Tucson, and Phoenix in terms of the percentage of arrestees who tested positive for various drugs. Rio Arriba County had the highest percentage of positive tests for opiates, any drug, and multiple drugs.

The percentage for opiate use (tested positive) was more than twice as high in Rio Arriba County as in

[3]There are two legitimate reasons why a person who claims to have used a drug in the past 30 days might not test positive. Most of the drugs tested can only be detected if they are ingested within 5 days of arrest. Also, a person may not have ingested enough of the drug to test positive.

the next nearest city (Albuquerque) and more than three times the average in the other jurisdictions. Rio Arriba had the second highest percentage of positive tests for cocaine and marijuana (1 or 2 percentage points behind Tucson on both). The only category of drug use where Rio Arriba County ranked lowest was for methamphetamine use.

Criminal Justice and Treatment Experiences

About 80 percent (250 of the 314 responding[4]) of the arrestees had at least 1 prior arrest. More detailed information on 169 of these cases shows that 115 (68 percent) had at least 1 arrest in the previous year. More than 60 percent (*n*=105) had 4 or more arrests in their lifetime. Twenty-four percent (40 individuals) had 10 or more prior arrests.

More than three-quarters (80 percent) of the sample had spent at least one overnight in jail or prison prior to this arrest. About one-half spent more than 3 months incarcerated during their adult life. Of those who had used an illegal drug in the past year,[5] 204 (56 percent) spent time in jail during the past year.

Forty-three percent (*n*=134) of arrestees had taken part in an inpatient treatment program some time during their life. Of those who had been admitted into an inpatient treatment program, 43 percent had spent a total of 1 month or less in this type of treatment. Twenty-four percent had been admitted into an inpatient treatment program during the previous 12 months.

Less than one-quarter (23 percent, or 71 individuals) of the eligible respondents had ever participated in an outpatient treatment program.[6] At least 26 of these people were enrolled in an outpatient treatment program in the past year. Of those who had been in outpatient treatment programs, more than one-third (37 percent) spent 1 month or less in outpatient treatment. Only nine individuals (13 percent) had spent a year or more total in outpatient programs.

Only five percent (*n*=15) had ever spent an overnight in a mental health facility, and only one-third of these (5 individuals) had done so in the past year. The low percentage of individuals who have received mental health treatment is particularly surprising given the high incidence of mental health problems in this group (see mental health section). Overall, 52 percent of the arrestees had some experience with some type of treatment program.

The CSAT Interview

Of the 179 arrestees who responded to the CSAT questionnaire, almost one-half (49 percent) reported some history of substance abuse counseling. When asked about their most recent treatment experience, the type of counseling was fairly evenly split between "alcohol only" (29 percent), "drug only" (34 percent) and "drug and alcohol" (37 percent). More than one-half (53 percent) of the arrestees reported that they successfully completed their most recent treatment, while one-third (34 percent) reported dropping out. The remaining arrestees (13 percent) were in treatment at the time of their arrest.

In contrast to the ADAM questionnaire that explicitly excludes self-help groups like AA (Alcoholics Anonymous) and NA (Narcotics Anonymous), the CSAT instrument asks about these types of treatment services directly. Less than one-half (45 percent) reported ever having been in a self-help group. Of the 79 individuals who said they had ever been in such groups, nearly one-half (47 percent) had attended within the past year. About one-quarter (24 percent) of those who reported attending self-help groups said they went to "Less than 10" meetings total in their lives; just over one-third (38 percent) reported attending "10–100" meetings; and another 38 percent said they attended "more than 100" meetings.

Dependence and Abuse: ADAM

If an arrestee indicates that he used alcohol or drugs in the past year, the ADAM interview asked a series of questions to determine his risk for dependence or abuse of alcohol or drugs. Based on these responses, he is then classified as "not at risk," "at risk for abuse," or "at risk of dependency."

Individuals were much more likely to be dependent on both alcohol and illegal drugs than at risk for abuse of those drugs (*see exhibit 4*). Of those responding to alcohol dependence and abuse questions (*n*=238), three-quarters (75 percent) were at risk of alcohol dependence or abuse, with 60 percent being at risk for alcohol dependence. Of those responding to the illegal drug dependency and abuse questions (*n*=201), 73 percent were at risk for abuse or dependence, with 61 percent being at risk of drug dependence.

[4]The number of cases here (314) is a bit larger than the number of completed cases (286) because some of the subjects who answered this question later either refused or were unable to provide a urine sample.
[5]The ADAM instrument asks for more information for those who admit to using an illegal drug in the past 12 months.
[6]The ADAM instrument specifically excludes self-help groups such as AA or NA from being considered in this section. For more information on arrestees experiences with these types of programs, see the CSAT section below.

Mental Health Survey Data

A total of 283 arrestees completed the Mental Health interview. More than one-half of those responding said that they had been "bothered by feeling down, depressed or hopeless" during the past month. Forty percent reported being bothered by "little interest or pleasure in doing things" during the past month. More detailed questions were asked of those who answered "yes" to either of these first 2 questions (*n*=173). Questions were asked about how often in the past 2 weeks they: (1) Had little interest or pleasure in doing things, (2) Had trouble falling or staying asleep, (3) Had problems with appetite or overeating, and (4) Felt bad about themselves. More than two-thirds (69 percent) said they had experienced three or all four of the indicators on several or more days in the past 2 weeks. More than one-half (55 percent) reported feeling at least one of the indicators on nearly every day during the past 2 weeks.

More than three-quarters (78 percent) of the respondents reported drinking. Here again, if someone admitted to drinking, a series of four questions was asked to measure the impact that drinking had on their lives. The four questions asked about: (1) Wanting to cut down on drinking, (2) Being annoyed by people who criticized their drinking, (3) Feeling bad or guilty about their drinking, and (4) Having a drink first thing in the morning. More than four in five (83 percent) reported having experienced at least one of the indicators, and more than one-half (52 percent) reported experiencing three or four of the indicators.

The next section of the mental health questionnaire asks about stress events. A total of 11 possible events are listed, including having combat experience, living through a natural disaster, rape or sexual molestation, and being a victim of terrorism. More than four out of five (81 percent) reported at least one stress event in their lives. More than one-half (58 percent) had three or more events. The stress events that were most likely to be experienced included being in a life-threatening accident (46 percent of all respondents), being a witness to someone being injured or killed (52 percent), being physically attacked (50 percent), or being threatened with a weapon or held captive (51 percent).

As with the other sections, if an arrestee said that they had experienced at least one stress event, questions were asked to measure the impact the events had on their lives. A total of seven possible impairments, including difficulty with sleep, feeling isolated, and avoiding places or activities, were explored. Almost four in five (79 percent) of those respondents who had a stress event reported experiencing at least one impairment, and nearly one-half (46 percent) reported experiencing four or more impacts. Most often mentioned were trouble sleeping (54 percent); avoiding certain people, places, or activities (51 percent); losing interest in doing things (49 percent); and feeling isolated or distant from people (47 percent). About one-quarter (23 percent) reported that they found it either very difficult or extremely difficult for them to live their lives.[7]

Finally the survey asked about past suicide thoughts, plans, and attempts. About one-fifth (21 percent) said they had ever seriously considered committing suicide, 11 percent had made a plan, and 14 percent had actually attempted suicide. Of the 39 who had attempted suicide, only one-third considered it a serious attempt. Nearly one-half (49 percent) said their attempt was a "cry for help."

[7]The questions asked "If you mentioned any problems with drugs, alcohol, or feelings, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people." The respondents are given four choices from "Not difficult at all" to "Extremely difficult."

Exhibit 1. Sociodemographic Characteristics of Adult Male Arrestees[1] in the ADAM Program in Rio Arriba County, New Mexico, by Percent: 2002–July 2004

Characteristic	Percent
Race/Ethnicity	
Hispanic[2]	56
White, non-Hispanic	24
Native American	16
Black or multiracial	4
Age Group	
30 and younger	58
31–40	24
40 and older	18
Education	
High school (HS) or general education development (GED)	38
Did not complete HS	37
School beyond HS	25
Employment	
Full-time work	43
Part-time work	9
Unemployed[3]	35
Other	13
Annual Family Income	
$10,000 or less	29
$10,000–$20,000	32
$21,000–$30,000	24
More than $30,000	15
Arrest Charges[4]	
Misdemeanor	78
Felony	21
Traffic violation	1

[1]Sample sizes varied, depending on the numbers responding to different instruments (e.g., arrest charges, all cases, *n*=506; age, race/ethnicity, education employment, ADAM, *n*=286; income, CSAT interview, *n*=179).
[2]Most were U.S. citizens; 6 percent were Mexican nationals.
[3]Most were seeking work.
[4]Represents the most serious charge.
SOURCE: New Mexico State University

Exhibit 2. Self-Reported Drug Use by ADAM Arrestees in Rio Arriba County and Average Age of First Use: 2000–July 2004

Drug	Ever Used	Used in Past Year	Average Age of First Use (Years)
Alcohol (5 or more drinks in a day)	91%	80%	16
Marijuana	77%	52%	14
Crack or rock cocaine	39%	23%	22
Powder cocaine	57%	34%	20
Heroin	35%	25%	20
Methamphetamine	18%	5%	22
Other illegal drug	32%	18%	19

SOURCE: New Mexico State University

Exhibit 3. Percentages of Male Arrestees Testing Positive for Selected Drugs in Rio Arriba County and Three Other Southwestern Sites: 2000–July 2004

Drug	Rio Arriba	Albuquerque	Tucson	Phoenix
Cocaine	41	38	43	28
Marijuana	46	34	47	41
Opiates	24	10	7	5
Methamphetamine	1	7	9	31
Any drug	76	62	71	71
Multiple drugs	42	24	30	30

SOURCE: New Mexico State University

Exhibit 4. Percentages of Male Arrestees at Risk for Abuse or Dependence on Alcohol and Illicit Drugs: 2000–July 2004

Substance/Risk Category	Percent[1]
Alcohol	
Dependence	60
Abuse	15
No risk	25
Illicit Drug	
Dependence	61
Abuse	12
No risk	27

[1]Represents only respondents who fit the criteria for drug or alcohol dependence.
SOURCE: New Mexico State University

New Mexico Drug Enforcement Administration Data

Finn Selander and David Monnette

Overview

In recent years, drug abuse patterns have become more diversified and complex in New Mexico. New drugs of abuse have emerged, and polydrug abuse has become more common. Methamphetamine is being transported into New Mexico from Mexico and California, and small clandestine laboratories located throughout New Mexico (primarily in rural areas) are producing the drug. Pharmaceuticals are being diverted to the "street" market and are often used in combination with illicit substances. Heroin and cocaine/crack abuse continue to pose serious problems for communities in the State.

Methamphetamine

Methamphetamine production and abuse are serious and growing problems in New Mexico. In addition to problems associated with abuse of this drug, methamphetamine poses many other problems for law enforcement agencies and communities. It is very time consuming, dangerous, and costly to "clean-up" the clandestine laboratories that are seized in the State. The chemicals used to produce methamphetamine are hazardous to children and other family members who reside in, or live near, the facilities where the drug is produced. The chemicals are often dumped or disposed of in areas where they are a risk to health and safety.

Although methamphetamine abuse indicators are relatively low compared with those for other drugs (e.g., heroin and cocaine), "supply side" data indicate that methamphetamine abuse has been increasing in the State, particularly in some areas. In 2003, 42.13 kilograms of methamphetamine were seized by the DEA. To date in 2004, 37.51 kilograms have been seized. The price for an ounce of methamphetamine ranges from around $500 to $800, while an "8 ball" (1/8 ounce) costs $100. The purity of the drug from local manufacturers is 70–99 percent.

About 67 percent of the methamphetamine in New Mexico is from Mexico and the super labs in California. The majority of clandestine labs that produce methamphetamine in the State are small "mom and pop" labs that produce methamphetamine by the gram—enough for a small number of people. Recently, however, a large methamphetamine production lab was seized in Rowe, New Mexico.

As found in other areas of the country, methamphetamine abusers are less prone than other types of drug abusers (e.g., heroin and cocaine abusers) to enter drug treatment programs. Some programs are not prepared to treat methamphetamine abusers who present different types of problems and needs than other types of drug abusers. Some programs (e.g., methadone maintenance) are structured to treat particular types of drug abusers.

Several different forms of methamphetamine are available in New Mexico…

- "Ice" is a highly addictive form of methamphetamine that resembles shards of ice.
- Recrystallized powdered methamphetamine is generally smoked. Solvents such as water, methanol, isopropanol, or acetone are used to remove the impurities.
- Methamphetamine pills are produced primarily in Burma. The pills, called "yaba" (which means "crazy medicine" in Thailand), usually contain a combination of methamphetamine and caffeine; they are often flavored. The pills are generally taken orally, but they can be crushed and snorted, or mixed with a solvent and injected.

As entrepreneurs, methamphetamine dealers find how best to market the drug. Since many abusers do not like to inject the drug, it is produced and marketed in other forms. Like cocaine, the purer form can be snorted.

Cocaine/Crack

Cocaine, produced in Bolivia, Peru, Columbia, and Mexico, remains a serious problem in New Mexico. Powder cocaine confiscated "on the street" in New Mexico is 20 to 30 percent pure. There has been a significant increase in the amount of cocaine seized in the State, from 75.07 kilograms in 2003 to 211.97, so far, in 2004. Cocaine sells for approximately $800–$1,400 per ounce, $100 per gram, and $150 for an "8 ball." Crack sells for $500 to $1,000 per ounce and about $20 for a rock. One kilogram of cocaine costs about $17,000, but the price drops to $13,000 for the purchase of multiple kilograms—the lowest price for cocaine in New Mexico for some time. This is important because the low price makes it more likely that the drug will be available "on the street."

Heroin

The primary type of heroin available in New Mexico is black tar from Mexico. Black tar heroin costs about $40,000 per kilogram, $1,200–$2,900 per ounce, and $120–$180 per gram. In 2003, 5.46 kilograms were seized in New Mexico, and a similar amount (5.05 kilograms) has been seized, so far, in 2004. Most of the heroin on the street is 50–70 percent pure, but it can be as high as 89–90 percent pure. Heroin has been a serious problem in Rio Arriba County for many generations, but abuse indicators tend to fluctuate in the county. For example, the last time the DEA made a "round-up" and a number of arrests in Rio Arriba County, the supply decreased, the price increased, and the heroin abuse problem decreased. However, the problem spiked up again rather soon. Law enforcement agents arrest the traffickers. When the supplier is arrested, the heroin addict must find a new supplier. The new supplier may have a more potent form of heroin, which may cause problems for the user, e.g., overdose. For example, an addict who injected two micrograms might get a purer dose of heroin from a new dealer, resulting in an overdose.

Marijuana

Marijuana is readily available in New Mexico, and it is the illicit drug most often consumed in the State. Marijuana is often used in combination with other drugs, including heroin, cocaine, and crack. A total of 7,995.34 kilograms have been seized so far in 2004, compared with only 1,488.80 kilograms in 2003. Marijuana sells for $600–$700 per pound, but it can be purchased wholesale for $350 per pound. Sinsemilla, a more potent form of marijuana (with a higher concentration of THC [tetrahydrocannabinol]), is somewhat more costly at $3,000–$5,000 per pound and $225–$300 per ounce.

Pharmaceutical Drugs

The DEA Diversion Division has a lead role in assessing and addressing problems associated with the diversion and abuse of pharmaceutical drugs, which have become more common in the State. OxyContin (oxycodone) is one of the licit drugs that has been diverted to the "street market" in New Mexico. This drug is referred to as "hillbilly heroin" because it first became popular as a "street drug" in Appalachian areas in Kentucky, Tennessee, and West Virginia. Reportedly, youngsters in New Mexico and across the Nation have been crushing the time-release capsules to get "high," sometimes resulting in overdose cases.

Recidivism[1] Among Incarcerated Women in New Mexico

Pamela Brown, R.N., M.P.H.

Increasing numbers of females have been incarcerated in New Mexico prisons in recent years. In June 2003, 560 females were incarcerated in the State prison system, and 2,640 were on probation or parole. The recidivism rate for females leaving prison after a first incarceration was 54 percent.

Study Description

An exploratory study of female inmates in New Mexico State prisons was conducted to determine the causes and factors associated with recidivism. More than 1,000 records stored at the New Mexico Women's Correctional Facility were reviewed to identify women who had been released or paroled from a first incarceration at any State prison between July 1, 1997, and June 30, 2000.[2] The records of 406 women who met these criteria were analyzed. In the time frame of this study, the women had a maximum of 3 years and a minimum of 1 year to either recidivate or "survive" (i.e., not recidivate).

Sample Description

The average age of the 406 women at time of parole was 33 years. More than one-half (51 percent) were Hispanic; 28 percent were White, 12 percent were African-American, and 9 percent were Native American. More than three-quarters (77 percent) had children younger than 18, 51 percent had not graduated from high school or earned a graduate equivalency degree (GED), and 38 percent had never held a job for more than 1 year.

Drug Abuse Among the Women

Most of the women had drug problems, as shown below:

- 85 percent had a history of drug addiction
- 40 percent had injected drugs (lifetime)
- 51 percent had used drugs by age 15
- 27 percent reported having received drug abuse treatment prior to incarceration
- 50 percent had been incarcerated for drug-related crimes.

Recidivism

Overall, 54 percent of the 406 women paroled or released from a first-ever prison incarceration recidivated over a 1–3-year time period.

Exhibit 1 shows the percentage of recidivism for these women by substance and time period. For the primary findings of this study, survival analyses were conducted to examine the association between different characteristics and recidivism, including substance dependence. This approach to analysis provides a more complete picture of the pattern and temporal context of recidivism.

The resulting curves, shown in exhibit 1, reflect the proportion of women with and without a specified substance characteristic who did and did not recidivate (i.e., who survived) over a period of 1–3 years measured in 2-month intervals.

Key Findings

- Of the 406 women in the study sample, 54 percent returned to prison for parole violation and/or new crimes.
- A history of heroin or cocaine and/or crack use was the dominant factor associated with recidivism.
- Ninety-five percent of the women who returned to prison had a history of drug or alcohol addiction.
- Seventy percent of the women who returned to prison were addicted to heroin, powder cocaine, or crack.
- Alcoholism alone and marijuana alone were not significantly associated with recidivism.
- Overall, 54 percent of the women recidivated over the 3-year period.

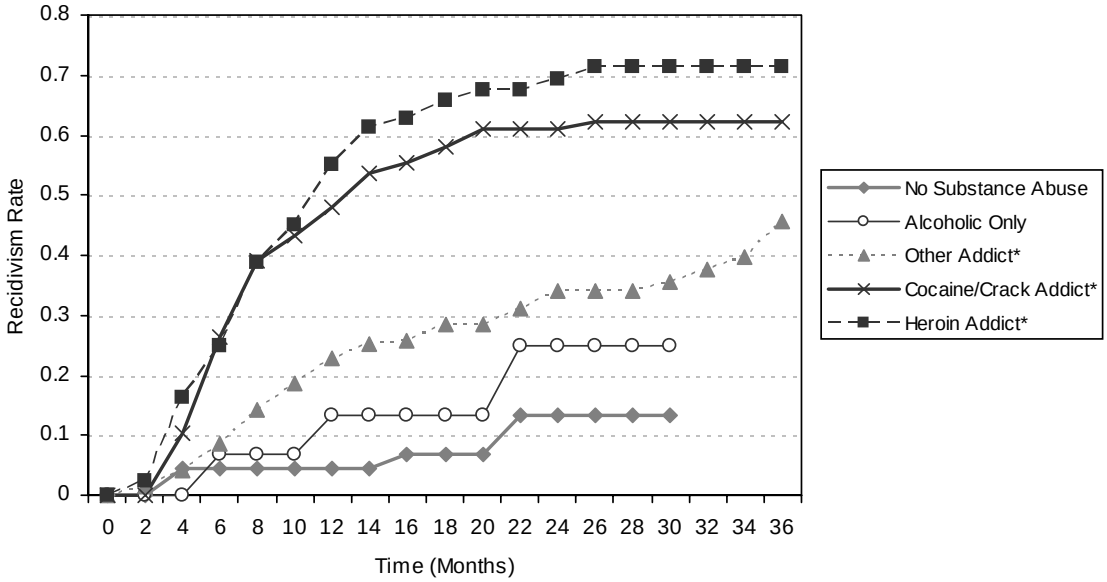
[1] Recidivism was defined as a return to custody for violating parole or committing new crimes.

[2] The records obtained from the correctional facility include intake interviews, discharge summaries, parole certificates, and classification files.

Reference

Brown, P. (January 2002) Recidivism Among Females in the New Mexico State Correctional System. Presented to the Subcommittee to the Correctional Oversight Commission by the New Mexico Correctional Department.

Exhibit 1. Rate of Recidivism for Paroled Women by Substance and Time Period: July 1997–June 2003



*With or without alcohol dependence.
SOURCE: New Mexico State Correctional Department

Drug Abuse Among Youth In New Mexico

New Mexico Youth Risk and Resiliency Survey—2003

Daniel Green, M.P.H.

Overview

The Youth Risk and Resiliency Survey (YRRS) has been conducted every other year in New Mexico since 2001.[1] The statewide survey of public high school students in grades 9–12 is offered to all 89 public school districts in New Mexico, and it provides statewide, county, and school district-level data.[2] Based on the Centers for Disease Control and Prevention's Youth Risk Behavior Survey (YRBS),[3] YRRS is designed to collect information about…

- ***Health risk behaviors:*** behaviors that put the student at risk of injury or disease
- ***Resiliency factors:*** protective social and family influences in the lives of youth
- ***Demographic information*****:** age, grade, gender, race/ethnicity.

More specific information on the risk behaviors and resiliency factors addressed in the YRRS is summarized in exhibit 1, together with substance use items.

Survey Methods and Response Rate

The following methods were used in the 2003 YRRS:

- An independent sample was drawn in each participating school district…
  - The probability of a school being selected is proportionate to the population of 9th–12th graders (i.e., large schools are more likely to be selected than small schools).
  - The survey is conducted in randomly selected second period classrooms, with each student in selected classrooms invited to participate.
- A self-administered and anonymous written questionnaire is used.
- Completed surveys are scanned electronically.

Note that for heroin, methamphetamine, and ecstasy, New Mexico YRRS inquired about past-30-day and past-12-month use, while the national survey asked only about lifetime use of these substances. For that reason, New Mexico prevalence rates are not comparable to national prevalence rates for these substances.

Participation in the YRRS in 2003 was as follows:

- Seventy-one of 89 school districts participated.
- The questionnaire was completed by 10,778 students in 103 schools.
- The State response rate was 56 percent (based on district, school, and student response).
- Response rates within participating school districts ranged from 15 to 96 percent.

Fifty-one percent of the participating students were female, and 49 percent were male. Forty-nine percent were Hispanic of single ethnicity, 28 percent were White non-Hispanic, 11 percent were American Indian, 2 percent were non-Hispanic with multiple ethnic backgrounds,[4] 6 percent were Hispanics with multiple ethnicities,[5] and 4 percent belonged to other racial/ethnic groups. The sample was rather evenly divided by grade: 30 percent were in grade 9, 26 percent were in grade 10, and 22 percent each were in grades 11 and 12.

Findings

As shown in exhibit 2, the New Mexico students' past-30-day use of marijuana, cocaine, and inhalants was significantly higher than that for students nationwide. Note that the proportion of New Mexico students who used methamphetamine in the past 30 days (7.3 percent) was substantial.

The prevalence for past-12-month heroin use appears very high (5.2 percent) among New Mexico students. Some uncertainty exists in the heroin-use prevalence because of an unusually large increase in self-reported heroin use from 2001 to 2003 (1 percent in 2001, 5.2 percent in 2003). A third data point, as will be provided by the upcoming 2005 YRRS, will lend more confidence to the heroin-use estimate.

[1]Names of the survey have varied over the odd-numbered years.
[2]Data are shared between Health and Education Departments and with communities.
[3]Because the YRRS is based on questions designed and validated by CDC, the results can be compared to National results.

[4]Non-Hispanic.
[5]"Hispanic multiple."

There were differences in substance use among New Mexico students in 2003 by gender and race/ethnicity. Males were significantly more likely than females to have used heroin in the past year (6.2 vs. 3.3 percent). Males were also significantly more likely than females to have used methamphetamine in the past 30 days (9.3 vs. 5.0 percent).

Race/ethnicity data show that American Indian students were significantly more likely than White non-Hispanic students to have used heroin in the past year (6.5 vs. 3.2 percent), although Hispanics with multiple ethnicities were the most likely to report past-year use of heroin (8.3 percent) *(see exhibit 3)*. American Indians (11.7 percent) were also significantly more likely than Whites (6.9 percent) to have used methamphetamine in the past year, and Hispanics of multiple ethnicities (nearly 13.0 percent) were significantly more likely than Hispanics of a single ethnicity (6.6 percent) to have used methamphetamine in the past year. Past-year ecstasy use was significantly higher among Hispanics of multiple ethnicities (12.3 percent) and American Indians (8.5 percent) than among Whites (4.9 percent).

Past-30-day use of marijuana was significantly higher among American Indian students than those in other racial/ethnic groups *(see exhibit 4)*. More than 45 percent of the American Indian students reported past-30-day use of marijuana, compared with between approximately 20 and 30 percent of the other groups. American Indian students were also significantly more likely than White students to have used cocaine in the past 30 days (12.4 vs. 6.0 percent).

Past-30-day marijuana use rose with each grade level, reaching more than 33 percent among seniors in 2003 *(see exhibit 5)*. The patterns of use for other drugs tend to show little difference by grade level.

Conclusions

Some major conclusions from the school survey data are as follows:

- For most substances, prevalence of drug use among students is higher in New Mexico than in the United States.
- Prevalence of cocaine use and inhalant use is relatively high among New Mexico students.
- Reported prevalence of heroin use is also relatively high.
- Males are more likely than females to have used heroin in the past year and to have used methamphetamines in the past 30 days.
- American Indian students are more likely to report…
  - Past-30-day marijuana use than other ethnicities, except non-Hispanic multiple ethnicities
  - Cocaine use than Whites
  - Heroin use than Whites
  - Methamphetamine use than Whites or Hispanics
  - Ecstasy use than Whites.
- Hispanic multiple ethnic students are more likely to report methamphetamine use and ecstasy use than White students.
- McKinley County, Socorro County, and Taos County have consistently high prevalence of student drug use.
- Southwest (District 3) and rural counties have relatively high rates of methamphetamine use among students.

Exhibit 1. Risk Behaviors, Resiliency Factors, and Substance Use Items Addressed in the YRRS

• **Risk Behaviors** ➢ Personal safety ➢ Violence ➢ Tobacco use ➢ Alcohol and other drugs ➢ Sexual activity ➢ Body weight and weight control ➢ Physical activity and nutrition	• **Resiliency Factors** ➢ Caring and supportive relationships (family, community, school, peers) ➢ Boundaries and expectations ➢ Positive peer influence ➢ Commitment to learning ➢ Constructive use of time ➢ Life skills/social competencies ➢ Community norms
• **Substances Used and Frequency of Use** ➢ Marijuana—past-30-day use ➢ Cocaine—past-30-day use ➢ Inhalants—past-30-day use ➢ Heroin—past-30-day use and past-12-month use ➢ Methamphetamines—past-30-day use and past-12-month use ➢ Ecstasy—past-12-month use	• **Substance Access and Use Behaviors** ➢ Ever used needle to inject illegal drugs ➢ Been offered, sold, or given illegal drugs at school in the past 12 months ➢ Ease of access to – Marijuana – Cocaine, LSD, methamphetamines, or other illegal drugs ➢ Acquaintance with adults who use marijuana, cocaine, or other drugs ➢ Acquaintance with adults who have sold or dealt drugs

SOURCE: YRRS

Exhibit 2. Comparison of Past-30-Day Substance Use Among Secondary School Students in New Mexico and Nationally in 2003, by Drug and Percent: 2003

Drug	New Mexico	Nation
Marijuana[1]	29.0	22.4
Cocaine[1]	8.9	4.1
Methamphetamine	7.3	–
Inhalants[1]	6.8	3.9
Heroin	4.1	–

[1]Differences were statistically significant.
SOURCES: YRRS (New Mexico), CDC (YRBS)

Exhibit 3. Past-12-Month Use of Heroin, Methamphetamine, and Ecstasy Among New Mexico Secondary School Students, by Race/Ethnicity and Percent: 2003

Race/Ethnicity	Heroin[1]	Methamphetamine[2]	Ecstasy[3]
Hispanic Multiple	8.30	12.97	12.26
American Indian	6.54	11.67	8.54
Hispanic	3.89	6.64	7.24
White	3.18	6.85	4.86

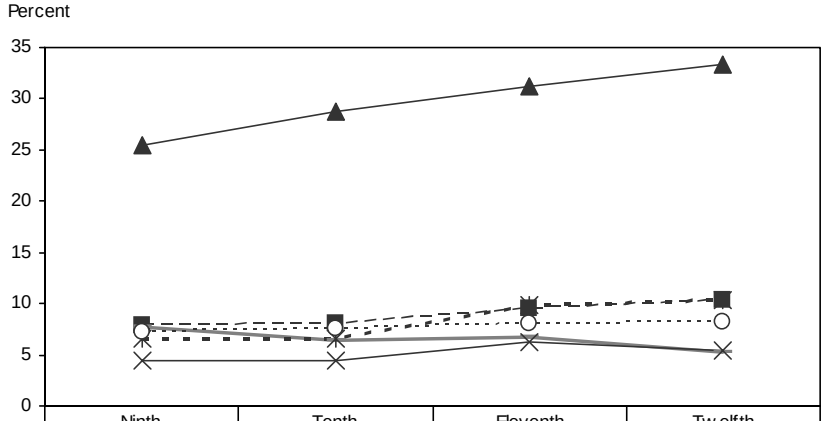
[1]Prevalence among American Indians was significantly higher than for Whites.
[2]Prevalence among American Indians was significantly higher than for Whites and Hispanics, and that among Hispanic Multiples was significantly higher than prevalence among students of Hispanic single ethnicity.
[3]Prevalence among Hispanic Multiple and American Indian students was higher than that among Whites.
SOURCE: Youth Risk and Resiliency Survey

Exhibit 4. Past-30-Day Use of Marijuana, Cocaine, and Inhalants Among New Mexico Secondary School Students, by Race/Ethnicity and Percent: 2003

Race/Ethnicity	Marijuana[1]	Cocaine[2]	Inhalants
American Indian	45.24	12.42	6.98
Hispanic Multiple	28.53	12.16	7.06
Hispanic	29.98	8.22	6.93
White	20.06	5.96	4.46

[1]American Indian use was significantly higher than use by other groups.
[2]American Indian use was significantly higher than use among White students.
SOURCE: Youth Risk and Resiliency Survey

Exhibit 5. Use of Selected Drugs Among New Mexico Secondary School Students, by Grade Level and Percent: 2003



	Ninth	Tenth	Eleventh	Twelfth
Marijuana use, past 30 days	25.5	28.7	31.2	33.3
Cocaine use, past 30 days	7.9	8	9.5	10.4
Inhalant use, past 30 days	7.7	6.4	6.7	5.2
Heroin use, past 12 months	4.5	4.4	6.3	5.4
Methamphetamine use, past 12 months	6.6	6.5	9.9	10.4
Ecstasy use, past 12 months	7.3	7.6	8.1	8.2

SOURCE: YRRS

The Social Context of Collegiate Prescription Drug Abuse

Gilbert Quintero, Ph.D.

Introduction

Prescription drug abuse among college students has surged since the late 1990s. Current surveys and surveillance systems do not collect the types of data/information needed to understand the nature and extent of this problem. The abuse of prescription drugs in the college population can be one indicator of emerging drug abuse trends.

Prior research on substance abuse among college students focused attention on alcohol abuse, including binge drinking, because this type of abuse was prevalent in earlier years. Historically, alcohol use has been associated with college lifestyles since the 19th century.

Currently, there are three major sources of data on substance use among college students:

- Monitoring the Future Project (Johnson et al. 2003)
- Core Alcohol and Drug Survey (Presley et al. 1996)
- Harvard Drug and Alcohol Survey (Gledhill-Hoyt et al. 2000)

The drug categories used in these surveys are limited. They have not included the growing number of prescription drugs used by college students.

Study Methods

A 3-year developmental/exploratory study, funded through a National Institute on Drug Abuse grant (R21DA16329), has been initiated in New Mexico to assess prescription drug abuse among college students. This two-phased study includes a formative in-depth ethnographic study and a survey. The survey will be developed, piloted, and implemented with undergraduate students at the University of New Mexico (UNM).

The formative phase of the study was initiated at UNM in April 2004, and the findings are presented in this paper. The three major research questions included:

- What social and cultural factors are related to prescription drug use among college youth?
- What terms, attitudes, and behaviors are associated with specific prescription drugs?
- What risks and negative outcomes are associated with prescription drug use?

The primary purpose of the formative phase of the study was to explore the broad outlines of research domains in order to develop an informed guide for the in-depth ethnographic interviews and survey. This formative phase included face-to-face taped interviews with 31 enrolled undergraduate students, age 18–25, who had used prescription drugs non-medically in the past year. Sampling procedures were established to insure adequate exploration of the primary research domains.

Preliminary Findings

Major findings from the formative study phase are as follows:

- Informants reported the non-medical use of 35 different prescription drugs
- Narcotic analgesics and benzodiazepines were the most frequently used
- The three primary reasons for using prescription drugs include…
  - To self-medicate conditions such as pain and stress and to help with weight and sleep problems
  - For social and recreational purposes, such as getting high, having fun with friends, relieving boredom, and for "the experience"
  - Academic demands, e.g., the use of Adderall and Ritalin to increase alertness and mental focus to facilitate completion of schoolwork.
- Sources of prescription drugs included…
  - Parents, friends, dealers, and doctors
  - Mexico—during trips (tourism) across the border. It was reported that prescription drugs are widely available, cheaper, and relatively easy to get in Mexico. The drugs obtained in Mexico included Soma, OxyContin, Percocet, Ritalin, Valium, Darvon, and Adderall.

- Some informants reported the use of combining marijuana and Adderall, marijuana and Vicodin, alcohol and Vicodin, and Soma and Roxicet. The combinations of drugs were used for a variety of reasons. For example…
  - Marijuana was used to increase creativity, while Adderall was used to increase concentration and energy.
  - Alcohol was used to amplify the effects of Vicodin.
  - Alcohol was used to increase the effects of Soma.
  - Soma was used to increase the effects of Roxicet.
  - Marijuana was used to enhance the effects of Vicodin and Adderall.

- Relative to other drugs, prescription drugs were considered…
  - Safer
  - Easier to get
  - Less expensive
  - Regulated
  - More socially accepted.

The students knew people in their own circles who had experience with drugs and drug combinations, and these people gave them information about side effects and dosage levels. They also reassured the students about use of the drugs and possible risks.

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Drug Abuse Treatment Among Homeless Youth

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Runaway and homeless youth constitute a diverse group. For example, researchers are noting that street-living youth show more severe substance use and high-risk behaviors than do runaway youth who obtain shelter services. Substance abuse, human immunodeficiency virus (HIV) risk behaviors, and mental and physical health problems among street-living youth are significant issues for those who serve this population. Compared to non-homeless counterparts, researchers have found higher rates of suicide (Molnar et al. 1998), physical and sexual abuse (Rew et al. 2001; Unger et al. 1997), and psychiatric disorders (Cauce et al. 2000) among street-living youth. One study found that the mortality ratio among 479 Montreal street-living youth (age 14–24) adjusted for age and gender was 11.67, compared with the expected mortality rate of 0.86 (Roy et al. 1998). These youth engage in many risky behaviors, including survival sex, intravenous drug use, multiple and high risk sexual partners, and lack of condom use (Ennett et al. 1999; Greene et al. 1995).

As Marshall and Bhugra (1996) note, most homeless individuals do not receive help from any service agency; this and their distrust of statutory health services are contributing factors to their continuing poor physical and mental conditions. Given the methodological challenges in locating, treating, and retaining homeless youth in treatment, especially when they are not staying temporarily in a shelter, it is not entirely surprising that there are few treatment outcome studies that focus on these youth.

In this ongoing study, substance-abusing homeless youth were randomly assigned to either (1) community reinforcement approach (CRA) (N=44), or (2) service as usual (SAU) through a drop-in center (N=40). All youth are contacted again at 3 and 6 months post-intake. This research is a step towards identifying effective interventions designed specifically for addressing problems among homeless youth.

Preliminary findings investigating pre- to post-treatment changes show that the overall percentage of days of substance use decreased significantly in the CRA group ($p < .001$), while use did not significantly decrease in the SAU group (p=.22). The CRA group decreased their use by 49 percent, while the SAU group reduced their substance use by 13 percent. Differential improvement with CRA treatment also included a decrease in the number of problems and consequences related to substance use (F (1, 81)=8.89, p =.004), as well an increase in the number of days *not* living on the streets (F (1, 81)=3.09, p =. 08).

These findings show that CRA treatment is effective at reducing substance use and associated problems and in increasing social stability (i.e., the number of days off the street) among this high risk group. Many other areas showed significant improvement in both groups over time, including HIV risk behaviors, HIV knowledge, and depression, but with no discernable differences between groups at this point.

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DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Participants reached the following conclusions about the SEWG and its Proceedings:

- *The information can and should be assimilated quickly.*
- *The diversity of indicator data in the presentations makes it possible to look at drug problems from different perspectives.*
- *There is a need for ongoing communication and collaboration—working together.*
- *It would be most helpful to expand the network of SEWG participants*.

Suggestions and recommendations for future monitoring and research on drug abuse patterns and trends in New Mexico included the following:

- *Monitoring methamphetamine indicators and other drug abuse patterns (i.e., polydrug use) is important and should be continued.*
- *There are regional differences in drug overdose deaths within the State; trends in drugs causing death should be identified and monitored more closely.*
- *Ongoing relationships should be developed between health and law enforcement; it is important to obtain accurate and up-to-date supply side data, such as methamphetamine lab seizures from DEA, State, and local law enforcement agencies.*
- *There is a dramatic increase in prescription drug abuse in the State, and a growing concern about the availability of these drugs, particularly through the Internet; there should be collaboration with the New Mexico Board of Pharmacy to access and analyze data collected by the Prescription Monitoring System, a Federal program soon to be implemented.*
- *There has been an increase in drug abuse among women and the impact this has on children and families. This problem needs to be addressed by providers and researched further.*
- *There is a need to expand and evaluate the effectiveness of drug treatment services in prisons. Treatments proven useful for heroin dependence, such as buprenorphine and methadone, should be introduced into prisons and assessed.*
- *There is a need for qualitative studies to get a better understanding of the drug problems that are emerging, such as methamphetamine and prescription drug abuse.*
- *Expansion of prevention programs could help raise the perception of risk concerning the drug problems that are emerging. This premise should be addressed and evaluated.*
- *It is important to assess the co-occurrence of mental health and drug problems.*
- *More information should be focused on drug abuse in rural settings and the availability of treatment services in these areas of the State.*

Followup is needed to determine the relationship between the dissemination of information presented at this SEWG meeting and new policy initiatives for redefining the State's behavioral health care system in which mental health and substance abuse services will be consolidated.

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