

Drug Overdose Deaths Decrease Statewide, New Mexico, 2004

Introduction

In 2003, New Mexico experienced a dramatic increase in drug overdose deaths due to prescription drugs. This alarming trend was observed in other US states as well. However, the unexpected increase in prescription drug overdose death exacerbated the already high burden associated with illicit drug use in New Mexico.

The national unintentional/undetermined drug overdose death rate was 5.8 per 100,000 persons from 2000-2002 (CDC Wonder). As in prior years, New Mexico ranked first (12.6 per 100,000 persons), followed by Maryland (10.8), Nevada (10.4), Utah (9.4) and Arizona (9.3). Four New Mexico counties ranked among the top 20 counties in the US with the highest rates of drug overdose death (among counties with stable rates), the most counties from any one US state.

Efforts to reduce the consequences of illicit drug use continue in New Mexico, remaining a priority for public health practitioners, providers and community members. However, it has been a challenge to describe the context in which prescription drugs contribute to the overall burden of drug-related death. The extent of nonmedical use of prescription drugs is not clear and it is particularly difficult to assess the role of physician prescribing of drugs for the purpose of pain management, or legitimate medical use.

Currently, the medical examiner has been a valuable source of surveillance data to identify trends in drug overdose death, abstract detailed data for decedents and measure overall burden. Data for 2004 have been anticipated to determine whether the increasing trend in drug overdose death continues, especially regarding prescription drugs. This report describes findings for drug overdose death in 2004 and compares previous years.

Nina Shah, M.S.

*Epidemiology and Response Division
New Mexico Department of Health*

Methods

All drug overdose deaths that occurred in New Mexico and among New Mexico residents were identified from 2000-2004, using data provided by the Office of the Medical Investigator (OMI) and the Toxicology Bureau of the Scientific Laboratory Division (SLD), New Mexico Department of Health. The manner of death was determined by OMI forensic pathologists as unintentional, suicide, homicide or undetermined. This analysis included only unintentional drug overdose deaths.

Classification of drug(s) causing death was determined by the OMI and was more than a determination of the presence or absence of a drug in a toxicological screen. Accordingly, the OMI classified an unintentional drug overdose death as an illicit or prescription drug death and determined the drug(s) causing death based on the findings from a complete investigation and full autopsy. Note that an illicit drug may have been a contributory cause of death in a prescription drug overdose and a prescription drug may have been a contributory cause in an illicit drug overdose death.

The number of drug overdose deaths and rates (expressed per 100,000 person years) were calculated for each year, 2000-2004. Death rates were age-adjusted to the 2000 US standard population and 95% confidence intervals (95%CI) were calculated.

Results

The death rate due to unintentional drug overdose death decreased from 16.7 per 100,000 persons in 2003 to 14.0 per 100,000 persons in 2004. This represents a 16% decrease from 307 drug overdose deaths in 2003 to 259 deaths in 2004. The OMI determined the overdose death to be caused primarily by either illicit or prescription drugs. Classified by the OMI, the death rate from prescription drugs decreased slightly from 5.8 deaths per 100,000 in 2003 to 5.0 per 100,000 in 2004. The illicit drug death rate decreased from 10.9 deaths per 100,000 in 2003 to 9.0 per 100,000 in 2004 (Figure 1).

There was a 21% decrease in the drug overdose death rate among males, from 23.9 per 100,000 in 2003 to 18.9 per 100,000 in 2004. For females, the rate decreased slightly from 9.7 per 100,000 in 2003 to 9.0 per 100,000 in 2004. The drug overdose death rate in 2004 was highest among Hispanics (17.7 per 100,000; 95%CI: 14.7, 21.1), followed by Blacks (16.2; 95%CI: 5.9, 39.5) and Whites (13.5; 95%CI: 11.1, 16.3). The drug overdose death rate among American Indians (2.8; 95%CI: 1.0, 8.0) was significantly lower than the rate among Hispanics and Whites.

In 2004, decedents from drug overdose had a median age of 43.7 years (range: 16-78 years), 33% were female, 50% were Hispanic and 44% were White. Poly-drug use was identified for 136 (61%) of the 224 decedents with data available for the drug(s) causing death. Overall, there were no statistically significant differences for decedents in 2003 and 2004.

Both prescription and illicit drug overdose deaths decreased by roughly 15% from 2003 to 2004. The proportion of prescription drug overdose death among all unintentional drug overdose deaths in 2004 remained the same as in 2003, 35%. Decedents from prescription drug overdose in 2004 were significantly more likely to be female (54% versus 21%; $p < 0.001$), White (58% versus 37%; $p = 0.001$) and older (median age of 45.4 versus 42.6 years old; Wilcoxon $p < 0.001$), compared to decedents from illicit drug overdose. The same relationship was found for decedents in 2003.

The five most common drugs causing death in 2004 were heroin/morphine, cocaine, alcohol, methadone and oxycodone. Only deaths due to methadone in-

creased from 2003 to 2004 (Table 1). The most common drugs causing death among 2004 illicit drug overdose deaths were heroin/morphine ($n=88$), cocaine ($n=80$), alcohol (cointoxication with an illicit drug; $n=44$) and methamphetamine ($n=21$). Among prescription drug overdose deaths, the most common drugs causing death were methadone ($n=23$), oxycodone ($n=17$), heroin/morphine ($n=13$) and alcohol (cointoxication with a prescription drug; $n=11$).

Drug Overdose Death Rates by County

Most New Mexico counties experienced a decrease in drug overdose deaths in 2004, though a few remained stable or increased by just one death. Only Socorro (1 death in 2003 to 5 in 2004), Luna (no deaths in 2003 to 4 in 2004) and Guadalupe (no deaths in 2003 to 3 in 2004) counties experienced an increase of two or more deaths from 2003 to 2004.

Total drug overdose death rates during 2002-2004 were highest in Rio Arriba (43.9 per 100,000), De Baca (29.8), Chaves (23.1), Guadalupe (22.1), Grant (21.0) and Bernalillo (20.6) counties (Figure 2). Valencia, San Miguel, Socorro, Eddy, Quay and Taos counties also had rates greater than the state rate of 14.9 per 100,000 for total drug overdose death. The counties with the highest rates of illicit drug overdose, as determined by the OMI, were Rio Arriba (34.2 per 100,000), Guadalupe (22.1), Chaves (14.7), Valencia (14.7), Bernalillo (14.4) and Torrance (13.1) counties. The counties with the highest rates of prescription drug overdose were De Baca (29.8 per 100,000), Luna (11.8), Grant (10.0), Rio Arriba (9.7), San Miguel (9.2) and Socorro (9.2) counties.

Conclusions

The overall decrease in drug overdose death in 2004 is encouraging. Deaths caused by illicit drugs (heroin, cocaine and methamphetamine) decreased by 16% statewide. It is possible that combined efforts from public health entities, health care providers, law enforcement and community stakeholders contributed to this reduction. The proportion of deaths caused by heroin among all overdose deaths decreased from 50% in 2002 to 40% in 2004. This is an interesting finding given the historically high prevalence of heroin use and availability in the state. Notably, 912 people (67% in Albuquerque, 32% in Española and 1% in Las Cru-

ces) have been trained in the Narcan Program administered through the Harm Reduction Program, Department of Health. To date, there have been 116 reports of reversed overdose through the use of Narcan (or naloxone, an antidote for opiate overdose) prescribed to participants in this program. In 2004, heroin seizures, greater diversification of drug treatment options (i.e., buprenorphine), overdose prevention education and ongoing outreach also likely affected this decrease in illicit drug overdose death.

The number of deaths caused by prescription opioid painkillers, except methadone, all decreased from 2003 to 2004. Following the startling increase in prescription drug overdose deaths in 2003, there are potential explanations for the subsequent decrease. It is hoped that increased awareness, education and vigilance among physicians, pharmacists and patients was a successful initial step in curbing deaths caused by prescription drug overdose. Also, law enforcement may have been effective in reducing street-diversion of commonly abused prescription drugs. Again, successful action against the drug problem in New Mexico cannot be effective without partnership, and the decrease in 2004 is most likely a result of combined efforts.

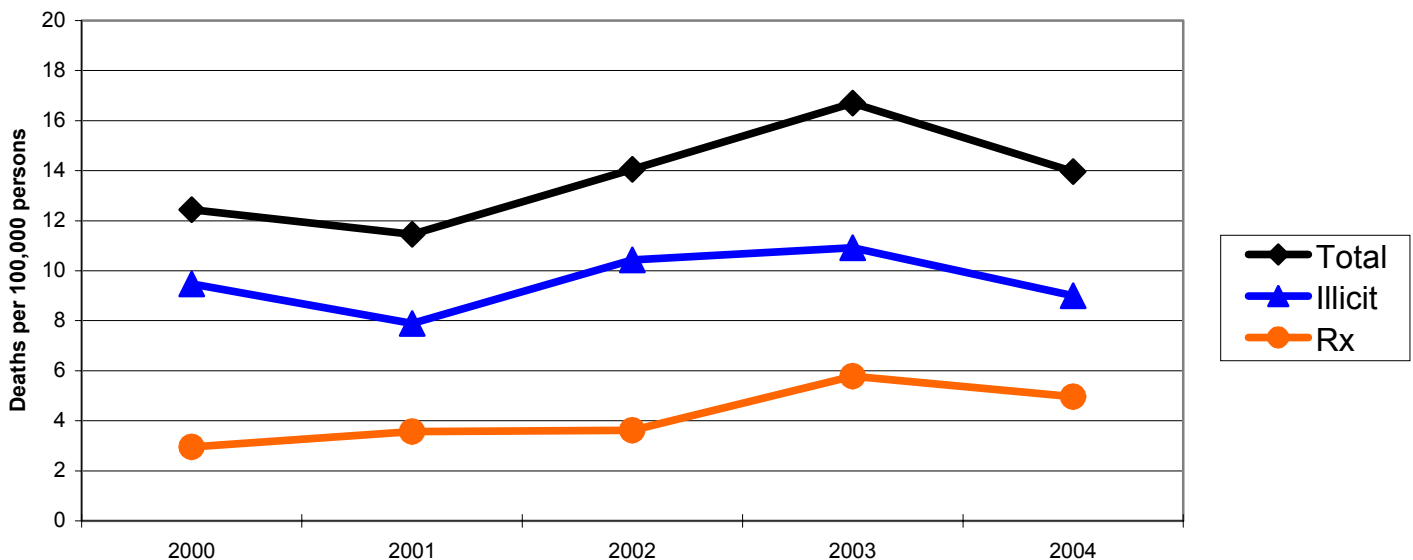
Methadone has been the subject of scrutiny in recent years because many states are reporting increases in methadone overdose. In New Mexico, the increase in methadone-caused death since 2002 is important since methadone-caused death actually decreased slightly from 1998-2001. It

is important to track and monitor these deaths to determine if the national trend for methadone-caused death has now translated to New Mexico.

Though the drug overdose death rate for females nearly doubled since 2000 (4.7 to 9.0 deaths per 100,000), the death rate for females was half the death rate for males in 2004. Most recent data also shows that disparity decreased between Whites and Hispanics for drug overdose death. It is important to examine rates by sex and race/ethnicity to monitor emerging trends among these populations, such as the types of drugs causing death.

Lastly, one must recognize the general trend in New Mexico drug overdose death rates, and be cautious to avoid complacency with yearly decreases. It is evident that drug overdose death rates can be erratic and depend on many factors such as drug trafficking patterns, law enforcement interdiction, large-scale and targeted public health initiatives, and other demographic or geographic trends in drug use. It is necessary to consider that the New Mexico drug overdose death rate in 2003 may have been an irregular data point in the overall trend. Allowing for this, smoothed data shows a slight but stable increase in drug overdose deaths since 2001. Although the reduction of this severe problem affecting all New Mexicans is hugely positive and should not be minimized, initiatives and collaboration must continue in order to stabilize and decrease drug overdose death.

Figure 1. Rates of Drug Overdose Death in New Mexico, 2000-2004



Age-adjusted to the 2000 US standard population
 Error bars represent the 95% Confidence Interval for the age-adjusted rate
 Source: The Office of the Medical Investigator

The New Mexico Epidemiology Report

C. Mack Sewell, Dr.P.H., M.S.
State Epidemiologist

Maggi Gallaher, M.D., M.P.H.
Assistant State Epidemiologist

Michael G. Landen, M.D., M.P.H. As-
sistant State Epidemiologist and Editor

The New Mexico Epidemiology Report
(ISSN No. 87504642) is published
monthly by the

Epidemiology and Response Division
New Mexico Department of Health

1190 St. Francis Dr.

P.O. Box 26110, Santa Fe, NM 87502

Toll-Free Reporting Number:
1-800-432-4404

24-Hour Emergency Number:
(505) 827-0006 or (505) 984-7044
www.health.state.nm.us

Presorted
Standard
US Postage
PAID # 390
Santa Fe, NM

**Table 1. The Most Common Drugs Causing Death* Among Drug Overdose
Deaths in New Mexico, 2002-2004**

	2002	2003	2004	% Change, 03-04
Total drug overdose deaths	253	307	259	-16
Rx drug overdose deaths	66	108	92	-15
Illicit drug overdose deaths	187	199	167	-16
Drugs causing death**	N=245	N=284	N=224	
Heroin/morphine †	133 (54%)	121 (43%)	103 (46%)	-15
Heroin	123 (50%)	106 (37%)	90 (40%)	-15
Morphine	10 (4%)	15 (5%)	13 (6%)	-13
Cocaine	94 (38%)	110 (39%)	84 (38%)	-24
Alcohol	76 (31%)	78 (27%)	55 (25%)	-29
Methadone	28 (11%)	34 (12%)	40 (18%)	18
Oxycodone	14 (6%)	26 (9%)	22 (10%)	-15
Methamphetamine	12 (5%)	23 (8%)	21 (9%)	-9
Diazepam	12 (5%)	16 (6%)	13 (6%)	-19
Propoxyphene	10 (4%)	18 (6%)	10 (4%)	-44
Fentanyl	2 (1%)	10 (4%)	8 (4%)	-20
Amitriptyline	8 (3%)	14 (5%)	7 (3%)	-50
Hydrocodone	18 (7%)	15 (5%)	5 (2%)	-67

* Not mutually exclusive

** n=245 in 2002, n=284 in 2003, n=224 in 2004 with data for the drug(s) causing death

† Often, the similar compounds of morphine and heroin are not differentiated in toxicology. Heroin-caused death was defined as either heroin, or morphine in toxicology among illicit drug overdose deaths. Morphine-caused death was defined as morphine in toxicology among prescription drug overdose deaths.