

## Drug Overdose Death in New Mexico, 2006

New Mexico had the third highest drug-related death rate in the nation in 2004, 17.8 deaths per 100,000 persons compared to the US rate of 10.4 per 100,000. The largest subset of drug-related death is unintentional/undetermined drug overdose, accounting for roughly 75% of drug-related death in the US. However, this proportion is typically larger in New Mexico, where unintentional/undetermined drug overdose death accounted for 82% of all drug-related death in 2004, with three New Mexico counties among the top 25 US county death rates from unintentional/undetermined drug overdose<sup>1</sup>.

New Mexico has a state-centralized medical examiner system. Data from this system allow for more detailed analyses of drug overdose and circumstances of death than can be gained from International Classification of Disease death codes from vital statistics. This report presents analyses of these data to describe recent changes in drug overdose death.

### Methods

The data for examining drug overdose death is provided by the New Mexico Office of the Medical Investigator (OMI). The OMI is authorized to investigate unnatural deaths in New Mexico and is contracted to investigate many of those that occur on federal and tribal jurisdictions as well. All deaths suspected of being due to the effect of drugs or poisons were diagnosed based on full autopsy, the circumstances of death, scene investigation, medical records and blood concentration of one or more substances, as determined by the OMI forensic pathologists. An unintentional drug overdose death was an accidental death that the OMI determined was drug-caused, either alone or in combination with alcohol. This analysis included only unintentional drug overdose deaths and therefore is not comparable to drug-caused death statistics as reported in the OMI Annual Report (which include all manners of death).

**Nina Shah, M.S.**

*Epidemiology and Response Division  
New Mexico Department of Health*

The number and rates (expressed per 100,000 persons-years) of drug overdose deaths were calculated for one-year and three-year time periods. Death rates were age-adjusted to the 2000 US standard population, and 95% confidence intervals (95%CI) for age-adjusted rates were calculated with the method based on the gamma distribution; for brevity, 95%CIs were presented only for time period comparisons in which intervals did not overlap, approximating a statistically significant difference at the  $\alpha=0.05$  level.

Please note that this report is based on updated OMI data and therefore may be slightly different than drug overdose totals reported in prior Epidemiology Reports.

### Results

The age-adjusted unintentional drug overdose death rate in New Mexico increased from 16.2 per 100,000 in 2005 to 17.2 per 100,000 in 2006, driven largely by a 25% increase in any prescription drug overdose death (from 7.2 per 100,000 in 2005 to 9.0 per 100,000 in 2006). The death rate for overdoses caused by any illicit drug, found either alone in combination with other substances, decreased 8% from 10.8 per 100,000 in 2005 to 9.9 per 100,000 in 2006. The multi-drug overdose death rate, where more than one substance was found to have caused overdose death, remained relatively unchanged at 10.1 per 100,000 in 2005 and 10.4 per 100,000 in 2006.

Of all unintentional drug overdose deaths in 2006, 89% had toxicology data for the drug(s) causing death. Of these, deaths were categorized into four unique groupings according to the type of drug(s) causing death. Figure 1 (on the back page) shows age-adjusted death rates by type of drug overdose from 1997-2006. From

2005 to 2006, the death rate from prescription drugs alone increased 25%, while the death rate from both illicit and prescription drugs remained stable and the death rate from illicit drugs alone decreased 12%. In 2006, the overdose death rate from illicit drugs alone was 7.0 per 100,000, the death rate from prescription drugs alone was 5.5 per 100,000 and the death rate from both illicit and prescription drugs was 2.6 per 100,000.

Death rates were calculated for the types of drugs that caused death, either alone or in combination with other substances. For illicit drugs, the overdose death rate from heroin decreased 21% from 6.7 per 100,000 in 2005 to 5.3 per 100,000 in 2006, while cocaine (5.6 per 100,000 in 2005 and 5.7 per 100,000 in 2006) and methamphetamine death rates (1.8 per 100,000 in 2005 and 1.7 per 100,000 in 2006) remained relatively unchanged. For prescription drugs, the overdose death rate from methadone increased 33% from 1.8 per 100,000 in 2005 to 2.4 per 100,000 in 2006, from opioids other than methadone increased 14% from 4.3 per 100,000 in 2005 to 4.9 per 100,000 in 2006, from tranquilizer/muscle relaxants remained stable (3.3 per 100,000 in 2005 and 3.2 per 100,000 in 2006), and from antidepressants decreased 18% from 1.7 per 100,000 in 2005 to 1.4 per 100,000 in 2006.

Figure 2 shows age-adjusted death rates by sex and the three largest racial/ethnic groups during the three-year periods of 2001-2003 and 2004-2006. The death rate among males increased from 20.7 per 100,000 during 2001-2003 to 21.9 per 100,000 during 2004-2006. A significant rate increase was found among females from 2001-2003 to 2004-2006, where drug overdose death rose from 7.4 per 100,000 (95%CI: 6.4, 8.5) to 9.9 per 100,000 (95%CI: 8.8, 11.1), respectively. The death rate among American Indians increased slightly during these two time periods, from 2.7 per 100,000 to 3.6 per 100,000. The death rate among Hispanic whites increased from 18.0 per 100,000 during 2001-2003 to 19.4 per 100,000 during 2004-2006. The drug overdose death rate among non-Hispanic whites in New Mexico significantly increased from 12.6 per 100,000 (95%CI: 11.2, 14.1) during 2001-2003 to 15.9 per 100,000 (95%CI: 14.4, 17.6) during 2004-2006.

During this time, Bernalillo County and northeast NM had the highest unintentional drug overdose death rates, and highest overdose death rates from heroin,

cocaine and alcohol/drug combinations. Bernalillo County also had the highest overdose death rate from methadone, as in prior years. The regions with the highest overdose death rates from heroin and cocaine had the lowest death rates from methamphetamine. Methamphetamine overdose death rates were highest in southeast NM (2.7 per 100,000) and northwest NM (1.8 per 100,000). During 2004-2006, the five counties with the highest drug overdose death rates were Rio Arriba (49.0 per 100,000), Guadalupe (46.9), Chaves (24.1), Socorro (22.0) and Torrance (21.7) counties – all had higher rates than the State (15.8).

## Discussion

Overdose from prescription drugs has added to the already severe burden of drug use in New Mexico. From 2005 to 2006, the death rate from any prescription drug increased by roughly 25% while the death rate from any illicit drug slightly decreased. This increase in prescription drug overdose death has driven the total unintentional drug overdose death rate to a peak of 17.2 deaths per 100,000 in 2006.

There was a large 34% increase in the drug overdose death rate among females from 2001-2003 to 2004-2006, even though the death rate among males remained more than twice the rate among females during 2004-2006 (21.9 per 100,000 versus 9.9 per 100,000). Similarly, there was a significant 26% increase in the drug overdose death rate among non-Hispanic whites between the two time periods, while the rate increased slightly among American Indians and Hispanic whites. Even so, Hispanic whites had the highest total drug overdose death rate during 2004-2006. It is likely that the overdose death rate increase among non-Hispanic whites was due to an increase in prescription drug overdose death, and the same scenario among female decedents.

Overdose death from prescription opioid painkillers increased statewide from 2005 to 2006, and accounted for the majority of prescription drug overdose deaths. Prescription opioids are a foundation for pain management and medical use of these drugs continues to increase. However, there is a high potential for abuse of opioids and numerous recent studies report an increase in nonmedical use of these drugs. In the US, the incidence of new nonmedical users of prescription opioids among persons aged 12 and older has grown to surpass the number of new marijuana users<sup>2</sup>. It is unknown

whether the increase in the prescription drug overdose death rate in New Mexico was primarily due to medical or nonmedical use. Nevertheless, it is probable that a sizeable proportion of decedents from prescription drugs was accessing services and encountered a health-care professional. This can be viewed as a window of opportunity to educate patients and family members on safe drug use and promote better communication between the patient and provider on issues such as pain and addiction.

The small decrease in overdose death from illicit drugs is encouraging, yet it is essential that harm reduction programs continue the delivery of consistent overdose prevention campaigns, with sustained emphasis on the dangers of concurrent use of heroin and depressants, and expansion of current innovative strategies. The diversification and increased availability of drug treatment may also help reduce overdose death rates. We encourage: primary care providers in areas of high drug use prevalence to maintain advanced training in addiction medicine; increasing the number of buprenorphine certified providers statewide; and development of policy for the availability of non-prescription naloxone, all of which may result in the reduction of

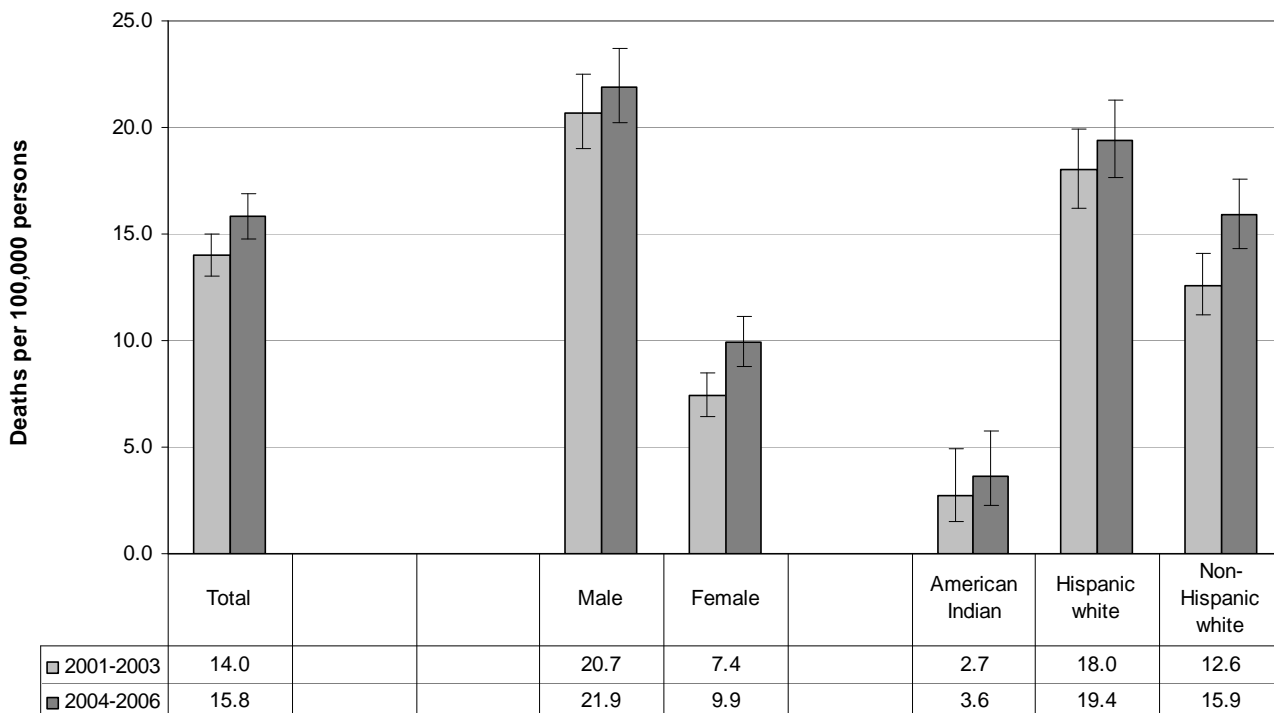
drug overdose death rates. To this end, a more comprehensive public health approach is warranted with attention to both prescription and illicit drugs users, as well as the overlap of concurrent users.

### References

1. CDC Wonder. Available at: <http://wonder.cdc.gov/>
2. Office of Applied Studies. *Results from the 2005 National Survey on Drug Use and Health: National findings (DHHS Publication No. SMA 06-4194, NSDUH Series H-30)*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

*For more information on becoming a buprenorphine-certified physician, please contact Dr. Miriam Komaromy, Medical Director of Turquoise Lodge, at 841-8978.*

Figure 2. Unintentional Drug Overdose Death Rates by Sex and Race/Ethnicity, New Mexico, 2001-2003 and 2004-2006



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

Michael G. Landen, M.D., M.P.H.  
Deputy State Epidemiologist & Editor

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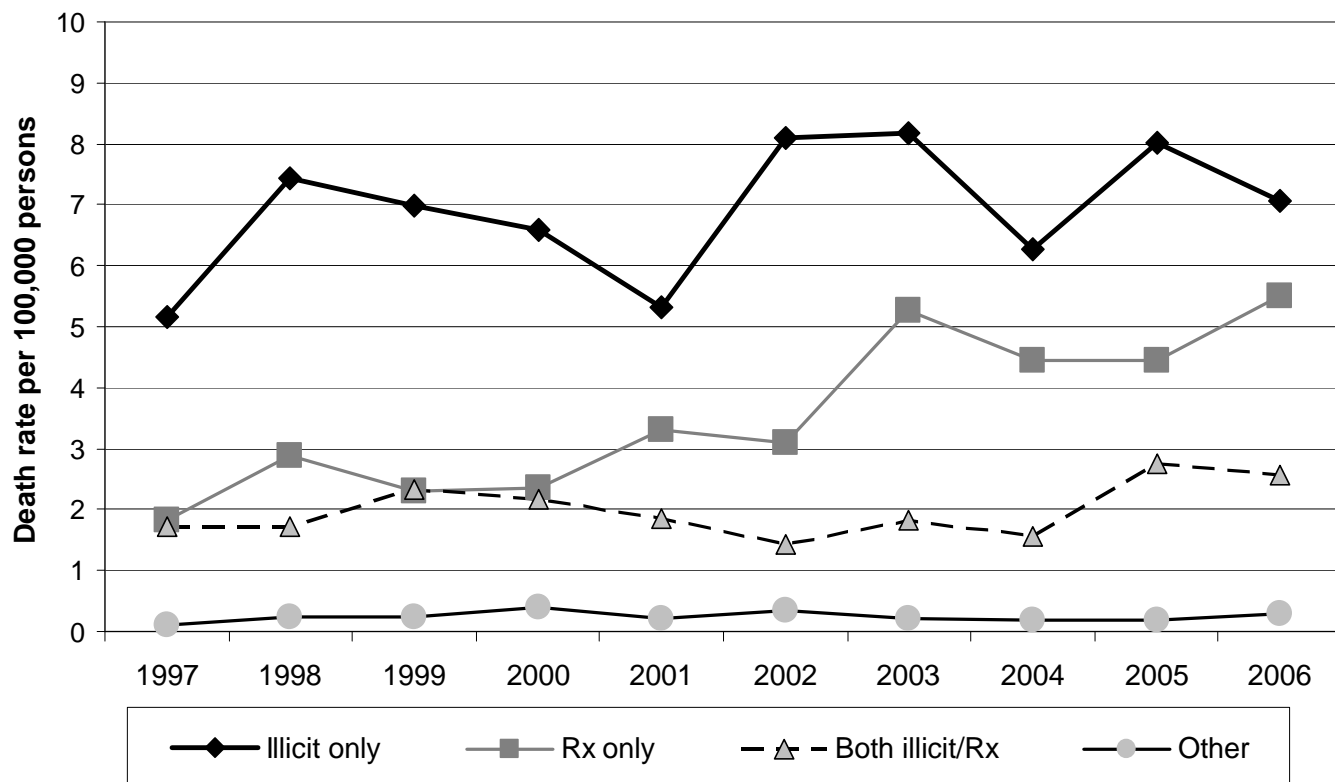
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Figure 1. Unintentional Drug Overdose Death Rates by Type of Overdose Grouping\*, New Mexico, 1997-2006



\* Type of drug overdose groupings are mutually exclusive