

Changing Trends in Drug Poisoning Death, 2006-2007

New Mexico had the second highest drug-induced death rate in the nation in 2005, 20.9 deaths per 100,000 persons compared to the U.S. rate of 11.2 per 100,000. Two New Mexico counties were among the top 25 U.S. counties for drug-induced poisoning death¹.

In the U.S., from 1999 to 2005, the age-adjusted death rate from unintentional drug poisoning, or overdose, increased 88% from 4.0 to 7.5 per 100,000. During the same time period, the unintentional drug poisoning death rate increased 37% from 12.2 to 16.7 per 100,000 in New Mexico¹. These rate increases were moderately attributed to poisoning from prescription drugs²⁻³. This is due to both the increased prescribing of these drugs by physicians and increased abuse or intentional misuse because they are more accessible – a combination of factors that is difficult to address. This is the situation for prescription opioids, effective medications in treating pain when used properly but with high potential for abuse.

Data from the New Mexico Office of the Medical Investigator (OMI) were analyzed. The centralized state medical examiner system provides more detail regarding drug poisoning and circumstances of death than can be gained from International Classification of Disease codes. This report describes recent changes in drug poisoning death trends.

Methods

The OMI investigates unnatural deaths in New Mexico including many that occur on federal and tribal jurisdictions. All deaths suspected of being due to the effect of drugs or poisons were diagnosed based on information from the medicolegal investigation: full autopsy, the circumstances of death, scene investigation, medical records and toxicology results (blood concentration levels of one or more substances), as determined by the OMI forensic pathologists. Death from unintentional drug poisoning was defined as a death

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that was drug-caused, either alone or in combination with other substances. This analysis included only unintentional drug poisoning deaths and therefore is not comparable to drug-caused death statistics as reported in the OMI Annual Report (includes both unintentional and intentional drug-caused death).

This report is based on updated OMI data and therefore may be slightly different than drug poisoning death totals reported in prior Epidemiology Reports. The number and rates (expressed per 100,000 person-years) of drug poisoning 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%CI were presented only for time period comparisons in which intervals did not overlap, approximating a statistically significant difference at the $\alpha=0.05$ level.

Results

The age-adjusted unintentional drug poisoning death rate in New Mexico increased from 17.2 per 100,000 in 2006 to 18.1 per 100,000 in 2007. There was a 28% increase in the death rate from any prescription drug poisoning (from 10.1 per 100,000 in 2006 to 12.9 per 100,000 in 2007), while the death rate for poisoning caused by any illicit drug increased 4% from 10.0 per 100,000 in 2006 to 10.4 per 100,000 in 2007. Multiple drug poisoning death, where more than one substance was found to have caused poisoning death, increased 14% from 12.2 per 100,000 in 2006 to 14.0 per 100,000 in 2007.

Of all unintentional drug poisoning deaths in 2007, 93% 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 poisoning from 1998-2007. Notably, the death rate from both prescription and illicit drugs increased nearly 80% from 2006 to 2007 (3.7 per 100,000 in 2006 and 6.6 per 100,000 in 2007).

Death rates were calculated for the types of drugs that caused death, either alone or in combination with other substances. The poisoning death rate from heroin (5.5 per 100,000 in 2006 and 2007), cocaine (5.9 per 100,000 in 2006 and 6.0 per 100,000 in 2007) and methamphetamine (1.8 per 100,000 in 2006 and 2007) remained stable from 2006 to 2007. For prescription drugs, the poisoning death rates from methadone (2.9 per 100,000 in 2006 and 3.0 per 100,000 in 2007) and tranquilizers/muscle relaxants (4.5 per 100,000 in 2006 and 2007) were stable, while the death rate from antidepressants increased 45% from 1.9 per 100,000 in 2006 to 2.8 per 100,000 in 2007. The death rate from prescription opioids other than methadone increased roughly 40% from 6.3 per 100,000 in 2006 to 8.8 per 100,000 in 2007. When examining all prescription opioids together, the death rate increased from 8.2 per 100,000 (95%CI: 6.9, 9.6) in 2006 to 11.0 per 100,000 (95%CI: 9.6, 12.6) in 2007.

Figure 2 shows age-adjusted death rates by sex and the three largest racial/ethnic groups during the three-year periods of 2002-2004 and 2005-2007. The death rate among males increased from 21.7 per 100,000 during 2002-2004 to 24.5 per 100,000 during 2005-2007. The death rate among females increased from 8.4 per 100,000 during 2002-2004 to 9.9 per 100,000 during 2005-2007. The death rate among American Indians was relatively stable during these two time periods, 3.4 per 100,000 and 3.8 per 100,000, respectively. The death rate among white Hispanics increased from 19.0 per 100,000 during 2002-2004 to 21.1 per 100,000 during 2005-2007. The drug poisoning death rate among white non-Hispanics in New Mexico significantly increased from 13.8 per 100,000 (95%CI: 12.3, 15.3) during 2002-2004 to 17.2 per 100,000 (95%CI: 15.6, 19.0) during 2005-2007, a 25% increase.

During 2005-2007, Bernalillo County and northeastern NM had the highest unintentional drug poisoning death

rates, 23.2 per 100,000 and 18.8 per 100,000, respectively. These regions also had the highest poisoning death rates from heroin, cocaine, prescription opioids, tranquilizers/muscle relaxants and alcohol/drug combinations. The regions with the highest poisoning death rates from heroin and cocaine had the lowest death rates from methamphetamine. Methamphetamine poisoning death rates were highest in southeastern NM (2.9 per 100,000) and northwestern NM 1 (2.0 per 100,000). During this time period, the five counties with the highest drug poisoning death rates were Rio Arriba (49.9 per 100,000), Guadalupe (29.3), Torrance (24.3), Valencia (23.9) and Bernalillo (23.2) – all had higher rates than the State (17.1).

Discussion

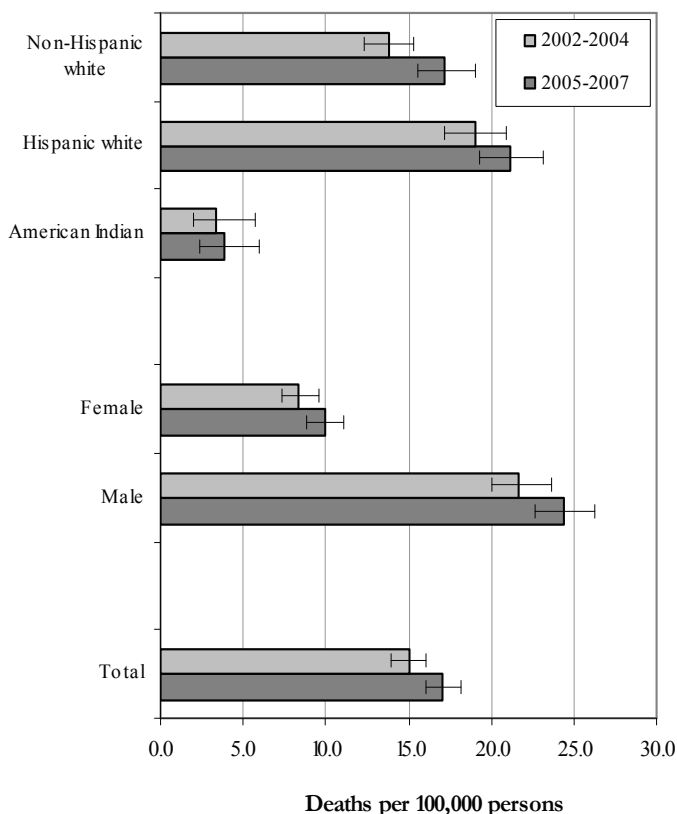
There has been a marked increase in the contribution of prescription drugs to unintentional drug poisoning death in New Mexico. From 2006 to 2007, the death rate from any illicit drug increased 4% while the death rate from any prescription drug increased nearly 30%. In 2006, half of all unintentional drug poisoning deaths were caused by prescription opioids, either alone or in combination with other substances. This proportion significantly increased to 65% in 2007.

New Mexico continues to struggle with high rates of illicit drug poisoning death. A national household survey indicated that illicit drug use prevalence remained relatively stable in New Mexico from 2004-2005 to 2005-2006⁴. But from this analysis, the troubling trend suggests that prescription drug use is rising among both non-users and users of illicit drugs. Therefore, it would be beneficial to expand current public health strategies and harm reduction services in order to increase overdose prevention training and distribution of naloxone to all opiate users, their friends and family members, and first-responders. Moreover, referrals to treatment and overdose prevention education should be more widely available to at-risk populations. This specific approach is recommended for overdose survivors at the window of opportunity⁵. Aside from the obvious benefits of treatment, it is important to encourage users to access these services rather than use diverted prescription drugs when the drug(s) of choice is unavailable (i.e., self-medication to treat withdrawal symptoms). With prescription opioids for instance, the doses that are available are highly potent and can easily result in death when misused, and even when used for therapeutic purposes⁶. There should also be contin-

ued emphasis on the overdose risk associated with mixing certain substances.

The recent upsurge in prescription opioid poisoning death is likely associated with changing prescribing patterns and increased access. The risk of abuse or addiction is associated more often with chronic pain management as opposed to treatment of acute pain⁷. It is sensible that chronic pain outpatients be carefully monitored for early signs of abuse when powerful agents are prescribed and the patient is most at risk for abuse or addiction. Another reason for the increased availability of opioids is that these drugs are being prescribed more by primary care physicians, as well as pain specialists. In New Mexico, physicians should be properly trained and fully aware of guidelines for prescribing opioids to treat pain, especially among patients who are taking other medications and are at risk or have history of addiction.

Figure 2. Unintentional Drug Poisoning Death Rates by Sex and Race/Ethnicity, New Mexico, 2002-2004 and 2005-2007



Unfortunately, the data analyzed for this report cannot adequately describe the context of drug use that preceded poisoning death. Surveillance using Prescription Drug Monitoring Programs will clarify the patterns of controlled substance use among poisoning decedents who were prescribed these drugs and died, a necessary element to inform prevention measures. This work is planned for New Mexico.

In 2007, roughly 12% of New Mexico students reported using a prescription painkiller in the past month to get high⁸. Since youth are particularly vulnerable, prescription drugs must be addressed alongside alcohol, tobacco and illicit drugs in prevention efforts among this population. Finally, there are some reports that non-drug abusing persons who develop addiction to prescription drugs may be at increased risk for initiating illicit drug use; this may occur when prescription drug addiction becomes too expensive. In reality, the use of medications is commonplace in daily life and increased marketing in the media may indicate changing attitudes towards the use of prescription drugs. There may also be a false perception of “safety” in using such drugs since they are sanctioned by physicians. For these reasons, raising awareness around the dangers of prescription drug abuse should be a priority.

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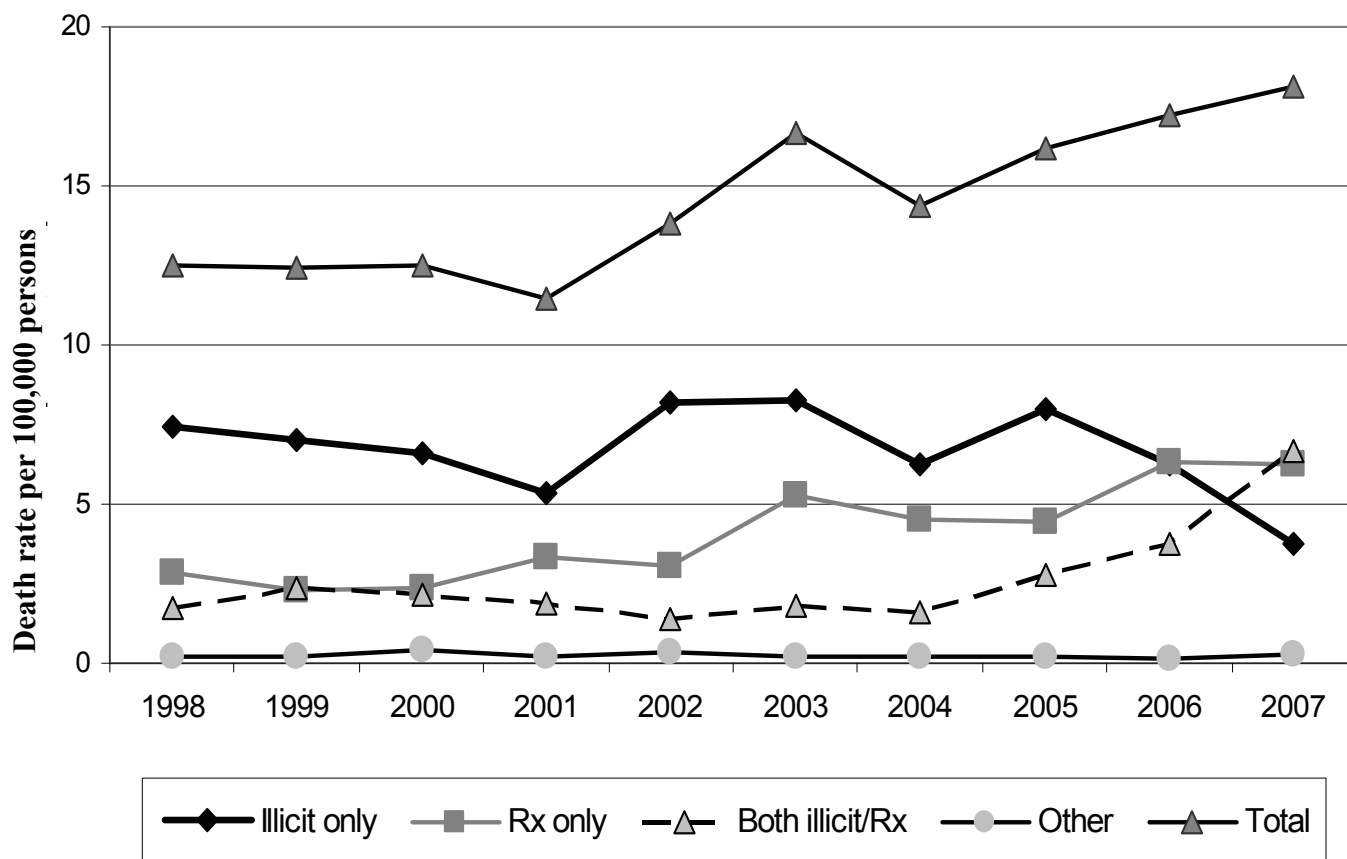
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Figure 1. Unintentional Drug Poisoning Death Rates by Type of Drug*, New Mexico, 1998-2007



* Type of drug poisoning groupings are mutually exclusive