INJURY UPDATE

*A Report to Oklahoma Injury Surveillance Participants**

November 30, 2010

Unintentional Poisonings Related to Medications - Oklahoma 1999-2006

Unintentional poisoning has been second only to motor vehicle collision as a leading cause of injury death in the United States. However, beginning in 2005, the two causes of death reversed for persons aged 35 to 54. Now unintentional poisoning is the leading cause of unintentional injury death in this age group followed by motor vehicle collision.

In 2007, almost thirty thousand individuals died from unintentional poisoning or almost ten individuals per 100,000. Approximately 90% of unintentional poisoning deaths were due to prescription or illicit drugs. Prescription drugs, specifically opioid analgesics, were the cause of death in nearly 40% of cases.

However, not every unintentional overdose from prescription drugs results in death. In 2008, the number of persons presenting to emergency departments for prescription or over-the-counter drug overdose equaled the number of persons presenting due to an illicit drug overdose. The three most common causes of prescription drug overdoses seen in emergency departments were oxycodone, hydrocodone and methadone. An estimated 49 million people over age 11 used prescription medications at some point in their lifetime for nonmedical reasons.

From 1994 to 2006, Oklahoma had 2,112 unintentional fatal medication overdoses, averaging 162 per year. Over the 13 year period, unintentional fatal medication overdoses increased seven-fold, with a peak rate of 11 per 100,000 in 2006 (Figure 1). Men accounted for the majority of deaths (61%), but the rate for women increased more quickly than men (nine-fold and six-fold respectively) (Figure 2). Persons in the age groups 35-44 and 45-54 had the highest fatality rates at more than double the rates of other age groups overall. The median age of women was slightly older than men, 44 years versus 42 years. Children younger than 15 and persons over age 65 had the lowest rates of unintentional medication overdose deaths (0.2/100,000 and 0.6/100,000 respectively). However rates increased most among persons 15-24 and 55-64 years of age.

Figure 1. Unintentional Medication Overdose Deaths by Year - Oklahoma, 1994-2006
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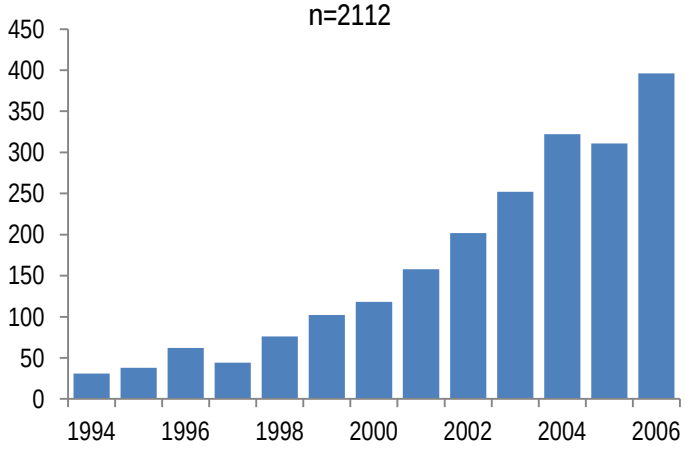

Persons residing in urban areas had higher rates of unintentional fatal medication overdoses than those living in rural areas (defined as less than 500 people per square mile). However, rates in rural areas of Oklahoma increased 1.3 times more than in urban areas.

Oklahoma State Department of Health

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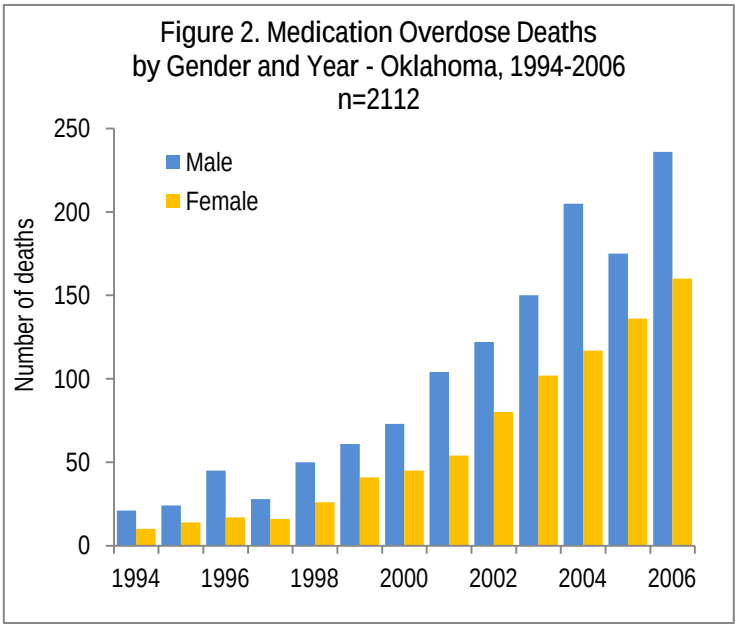
Over the 13 year period, 3,743 substances were identified as contributing to medication overdose deaths. Of those, opioid prescription analgesics contributed to 53% of deaths and anti-anxiety medications contributed to 12%. The five individual substances found most frequently in unintentional poisoning deaths include: methadone (31%); hydrocodone (19%); alprazolam (15%); oxycodone (15%); and morphine (12%). Deaths related to opioids, antianxiety agents and muscle relaxants increased 11-fold over the study period, whereas alcohol and central nervous system stimulant related deaths increased five-fold over the same time period. Only three non-prescription substances out of the 15 most common resulted in overdose deaths: alcohol (12%), cocaine (4%) and acetaminophen (4%).



Illicit drugs were only present in 8% of reported cases of unintentional medication overdose deaths, but were two times more common in non-white decedents. The majority (91%) of decedents ingested only medications. Of those, more than half (56%) had two medications considered contributing to the fatality; 17% had more than three medications considered contributing to the fatality. Alcohol was considered contributing to the fatality in one in five cases. Alcohol use varied by gender (men were more than 1.6 times more likely to have alcohol present) but not by race.

CASE BRIEFS

- A 31-year old male with a history of seizures advised his family he was not feeling well and took several Lortab (hydrocodone). Shortly after taking the medication, he began having seizure-type activity and severe vomiting. The family called 911; EMS arrived to find the man dead. There was no history of overdose attempts.
- A 53-year old male with a history of complex medical needs and chronic back pain was found unresponsive by his wife after returning from church. There was no history of overdose attempts.
- A 34-year old male was found unresponsive by his wife. He had a history of prescription pain medication abuse subsequent to a motor vehicle collision with spinal cord injury. At the time of death, he had no prescriptions for pain medications and was buying them from street dealers.
- A 57-year old female was found unresponsive by her husband. She had recently complained of not feeling well. She was on multiple medications and was known for adhering to the specified dosages. There was no history of overdose attempts.
- A 57-year old female was last known to be alive when she spoke to a friend on the phone. At that time she mentioned she had been to the doctor's office for a Demoral shot. She was found by a neighbor. Two Fentanyl patches were found near the injection site.

Oklahoma statistics provided by Emily Piercefield, et al, *Am J Prev Med* 2010;39(4)357-363.

PREVENTION

- **Never share** or sell your prescription drugs.
- **Dispose** of unused, unneeded, or expired prescription drugs.
- Keep pain medications in a **safe place** that can only be reached by people who take or give them.
- Keep medicines in their **original bottles** or containers.
- **Monitor** the use of medicines prescribed for children and teenagers.
- **Never drink** alcohol while taking medication.
- **Consult** your heath care provider before taking new medications.
- Put the poison control number, **1-800-222-1222**, on or near every home telephone and save it on your cell phone. The line is open 24 hours a day, 7 days a week.

Prepared by: Liz Langthorn, MPH
Injury Prevention Service