

Ending Prescription Medication Deaths in Utah: Finding Answers in Research

Lynn R. Webster, MD, Medical Director, Lifetree Clinical Research and Pain Clinic
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Unintentional fatalities due to prescription pain medications are an increasing problem in the United States and Utah. In Utah, deaths due to prescription opioid poisoning increased from approximately 50 in 1999 to over 250 in 2006. Preliminary investigations indicate that methadone, oxycodone, hydrocodone, and fentanyl are most often implicated and that both prescribed medications and medications obtained by other means are involved. However, little else is known about the risk factors for these prescription opioid-related fatalities.

We Know Utah Has a Problem ...:

Of the 476 drug-related deaths in Utah last year, 307 were attributed to legal drugs, whether prescription or over-the-counter. The data further show:

- Large increase in deaths from opiate pain prescriptions 1999-2003
- Age of decedents primarily 25 to 54
- Utahns in every part of the state affected
- The problem is still ongoing

Sources: Sundwall DN, Rolfs RT. Prescription medication deaths in Utah: summary of findings. Workgroup meeting Oct. 24-25, 2005.

Utah Office of the Medical Examiner

Utah is No. 1 in the Nation for Prescription Abuse

- 7.88 percent of 12- to 17-year-olds and 13.49 percent of 18- to 25-year-olds used prescription painkillers for nonmedical reasons.
- Just 4.32 percent of those over age 25 did.

Source; U.S. Department of Health and Human Services for those over age 25.

So, the average drug decedent in Utah is close to 40 years of age, but the people who are abusing them recreationally are younger.

These groups are having problems for different reasons. Both groups need to know “Where’s the Harm” in prescription drugs.

We Know It Is the Nation's Problem, too:

6.4 million Americans are current non-medical users of prescription drugs

Source: Substance Abuse and Mental Health Services Administration. (2006). Results from the 2005 National Survey on Drug Use and Health: National Findings (Office of Applied Studies, NSDUH Series H-30, DHHS Publication No. SMA 06-4194). Rockville, MD.

We Need to Take Action:

- Define causes.
- Identify unanswered questions leading to interventions.
- Identify action steps that can be taken.

Source: Sundwall DN, Rolfs RT. Prescription medication deaths in Utah: summary of findings. Workgroup meeting Oct. 24-25, 2005.

Drug Poisoning Deaths Match Pace with Drug Sales:

The rise in deaths has coincided nationally and in Utah with the rise of prescribing to treat pain.

Unintentional drug poisoning mortality rates increased on average:

- 5.3% per year from 1979 to 1990
- 18.1% per year from 1990 to 2002.
- The increase in deaths generally matched the increase in sales for each type of opioid.
- **The increase in deaths involving methadone (213%) is comparable to increase for pain management (175%) but not to increase for narcotics treatment programs (43%).**

Source: Paulozzi LJ, Budnitz DS, Xi Y. Increasing deaths from opioid analgesics in the United States. *Pharmacoepidemiology and Drug Safety* 2006;15(9):618-627.

Doubtless, some patients who were legally prescribed medication for pain died because they took too much on their own or were prescribed too much by a doctor. However, more data are accumulating to suggest many deaths occur in people with prior histories of drug abuse:

According the DEA, most methadone-related deaths in recent years involved

- Users who overused after taking the drug without a prescription, or
- Methadone addicts who took too much

“With more prescriptions, there’s more methadone in the supply pipeline.” Denise Curry, DEA.

Source: "Painkiller more available for abuse." By Donna Leinwand, USA Today, Feb. 13, 2007.

Drug addicts account for most methadone-related deaths, according to Nicholas Reuter, senior public health analyst, SAMHSA.

Source: "Deadly abuse of methadone tops other prescription drugs," By Donna Leinwand, USA Today, Feb. 13, 2007.

Diverted Pharmaceuticals:

Knowing the true sources of diverted pharmaceuticals is one step toward stopping the flow of illicitly used prescription drugs.

Sources of Nonmedical Opioids

Part of the challenge is in discovering how opioids end up in places where they are abused or diverted. Utah was one of the first states to establish a statewide prescription monitoring program (PMP) yet also has the highest rate of prescription drug abuse in the nation. Why hasn't the database helped to curb the problem in Utah? A member of the National Association of Drug Diversion Investigators posted the following message on the association's mailing list: "A failure to decrease abuse doesn't mean that the (prescription monitoring program) is ineffective. We don't know how much diversion is from scripts and how much from theft. Unless you know those proportions you don't know how much impact to expect from a PMP."

Those thoughts remind us that we *should not conclude* ahead of the evidence that most nonmedical and diverted pharmaceuticals flow directly from doctor's prescription pads. Studies show this is not true in other areas of the US, and the supply chains are likely to be varied and complicated in Utah as well.

The National Survey on Drug Use and Health asked nonmedical users of prescription psychotherapeutic drugs how they obtained the drugs they recently used nonmedically. In 2005, the most prevalent source was "from a friend or relative for free."

- Among persons aged 12 or older who used pain relievers nonmedically in the past 12 months, 59.8 percent reported that the source of the drug the most recent time they used was from a friend or relative for free. Another 16.8 percent reported they got the drug from one doctor. Only 4.3 percent got the pain relievers from a drug dealer or other stranger, and only 0.8 percent reported buying the drug on the Internet.

Source: 2005 National Survey on Drug Use and Health (NSDUH): National Highlights, Substance Abuse and Mental Health Services Administration (SAMHSA).

Theft and pilferage can feed the supply of illicit pharmaceuticals. An analysis of Drug Enforcement Administration data from 22 states shows a high degree of diversion occurring within the chain of pharmacy supply, either as theft from pharmacies or in the manufacturing and distributing functions. Data from the four-year period 2000-2003 showed:

- Almost 28 million dosage units of prescription controlled substances were diverted in 12,894 separate incidents, primarily involving thefts and losses from pharmacies prior to prescribing.

Those investigators state:

“...national discussion about pain medication abuse and diversion should be better informed by reliable information about whether abused drugs are coming from those registered to handle controlled substances lawfully, or from those who engage in criminal activities ... The unchecked flow of pain medications diverted from nonmedical sources will not be addressed if diversion control focuses only on prescribers and patients.”

Source: Joranson DE, Gilson AM. Drug crime is a source of abused pain medications in the United States [Research Letter]. *J Pain Symptom Manage* 2005; 30(4):299-301.

It is instructive to note that data show many diverted pharmaceuticals 1) become available from sources in the chain of supply before they ever reach a doctor's office, and 2) are stolen from home medicine cabinets. Only policies crafted to address known problem areas will succeed. To try to curb supply -- through limits on quantities, duration or coverage of prescriptions -- without addressing demand would probably penalize people who use opioids appropriately for pain, while shifting would-be diverters and recreational users to other sources, such as street procurement and Internet pharmacies that issue pharmaceuticals with no prescriptions required and no questions asked.

This is not to say that the rise in prescribing for pain has not contributed to availability of opioids for abuse and diversion – it is clear that it has. Data show that increases in nonmedical abuse have corresponded with the increase in the availability of opioids for pain as shown in the following quote:

"In our previous study ... data for 1990 to 1996 showed steadily increasing medical use and relatively low and stable levels of abuse ... At that time, we concluded that increased medical use of opioid analgesics did not appear to contribute to increased adverse health consequences."

" ... it is evident that in recent years increased medical use of several opioid analgesics is associated with increased abuse ..."

"Intentional misuse of prescription controlled substances should not be allowed to compromise patient access to needed medications."

Source: Gilson AM, Ryan KM, Joranson DE, Dahl JL. A reassessment of trends in the medical use and abuse of opioid analgesics and implications for diversion control: 1997-2002. *J Pain Symptom Manage* 2004; 28:2.

Utah's Controlled Substances Database: Only as Good as We Make IT

Prescription monitoring programs (PMP's) only identify:

- the amount of scheduled substances prescribed
- who is prescribing
- to whom they are prescribed.

PMP's cannot determine:

- the appropriateness of the prescriptions
- whether the drugs will be diverted.

Large amounts prescribed to a single patient or from a single provider *can not* in itself be judged inappropriate. However PMP's *can* identify individuals who are "doctor shopping"(obtaining unauthorized prescriptions from more than one provider), but it cannot determine the motive for the doctor shopping. Some "doctor shoppers" may be seeking additional medication for undertreated pain; others may have a substance-use disorder; or they may have both undertreated pain and a substance-use disorder. Regardless, the remedy is more intense medical intervention not legal prosecution.

Patients who are labeled "drug seekers" are rarely diverters. Physicians afraid or unwilling to adequately treat pain can contribute to drug-seeking behavior. Insurance plans that fail to provide adequate coverage can also contribute to perceived "doctor shopping" as patients seek greater pain relief. PMP's can provide useful information on patterns of prescription and can enable better medical decisions to benefit individual patients. However, states that assign a primary enforcement mission to a PMP should not congratulate themselves prematurely that they are "curtailing drug abuse." A statistic of reduced prescribing may indicate diminished patient care rather than a triumph of law enforcement.

Who is Abusing?

Logically, abusers of opioids and other pharmaceuticals are at the greatest risk of dying from overdose. To answer responsibly the question of who abusers are, the evidence must lead. Salt Lake City Weekly recently published an article about abusers of pain medication who jump to using heroin. The education to a trend is useful, but the story also spreads fear of taking even one pain pill, neglects to mention that the genetically predisposed disease of addiction is statistically rare among opioid-consuming patients, and lacks mention of the many more thousands of Utah patients who take their pain medication responsibly. This is typical of media portrayals. In particular, news articles pertaining to OxyContin are prone to unscientific moral outrage and fear mongering. Portraits are often painted of patients who received pain medication for an initial surgery or injury and “got hooked.” But evidence paints a far different portrait of abuse and addiction:

An analysis of 27,816 subjects admitted to 157 US addiction-treatment programs from 2001–2004 showed that of the 5% who reported prior OxyContin use, 78% percent said the drug had not been prescribed to them for any medical reason. Furthermore, the use was part of a long-term pattern of abuse of multiple substances.

Source: Carise D, Dugosh KL, McLellan AT, Camilleri A, Woody GE, Lynch KG. Prescription OxyContin abuse among patients entering addiction treatment. *Am J Psychiatry*. 2007 Nov;164(11):1750-6.

More than ever, it is important to find medical remedies for the disease of addiction to help prevent the mortality associated with it. One way our committee could do this is to support the continuation of the pilot program established by the state Drug Offender Reform Act, which facilitates the movement of drug offenders into treatment.

Likely factors in increased overdose deaths:

1) Use patterns by patients and others:

- Recreational users
- Disease of addiction.
- Nonadherence to pain therapy directions, eg, overuse to chase pain
- Combining substances such as alcohol, street drugs, benzodiazepines or other opioids, either authorized or unauthorized.

2) Clinician error:

Acute Pain Therapy

- Hospital overdose
- Outpatient overdose (ER, post op)

Chronic Pain Therapy

- Over prescribed for the patient
- Medical complications
- Harmful medication combinations

Trends in Prescription Drug Abuse

- Sales of opioids are increasing along with diversion and nonmedical use.
- Opioids are easy to obtain and viewed as “safer” than street drugs.
- Of all age groups, young adults have the highest rates of lifetime use of psychotherapeutics.
- Fewer teenagers in 2005 thought that there was great risk in using these drugs, compared to 2004.
- Emergency department visits involving non-medical use of pharmaceuticals usually involve multiple drugs and alcohol.
- Individuals who enter substance abuse treatment with problems with narcotic analgesics or benzodiazepines differ from heroin users in their characteristics and their drug use patterns.

Source: Maxwell JC. Trends in the abuse of prescription drugs. The Center for Excellence in Drug Epidemiology. The Gulf Coast Addiction Technology Transfer Center. The University of Texas at Austin; November 2006.

Characteristics of Prescription Drug Abusers

Compared to individuals entering treatment with a problem with heroin, prescription drug abusers who seek treatment are:

- Less likely to be persons of color
- Less likely to be male
- Less likely to use daily
- More likely to have begun use at an older age
- More likely to be referred by another healthcare professional
- More likely to be poorly insured or underinsured*

Sources: Maxwell JC. Trends in the abuse of prescription drugs. The Center for Excellence in Drug Epidemiology. The Gulf Coast Addiction Technology Transfer Center. The University of Texas at Austin; November 2006.

* Medicaid paid for more than one-third of the 1.3 million hospital stays related to prescription or illegal drug abuse in 2005, according to the latest News and Numbers from the Agency for Healthcare Research and Quality (AHRQ).

Teens at Risk for Abuse of Prescription Pain Relievers:

According to the Partnership Attitude Tracking Survey (PATS)*, teens in grades 7 through 12 hold the following attitudes:

- About half of all teens do not see great risk in abusing prescription drugs
- A majority of teens agree prescription drugs are easier to get than illegal drugs
- Four of 10 believe they are much safer to use than illegal drugs – even if they weren't prescribed by a doctor
- Roughly three of 10 agree there is nothing wrong with using prescription medicines once in a while and that prescription pain relievers are not addictive

Such surveys show that many teens hold dangerous views about prescription drugs. Furthermore, research shows that most teens obtain the drugs they abuse from family and friends – often stealing prescriptions from a medicine cabinet. It is important to talk to teens about drug abuse and to safeguard your own prescriptions to ensure they are not accessible to teenagers or others who visit your home.

*Completed in 2005 by 7,218 adolescents.

Source: Partnership Attitude Tracking Study (PATS): teens in grades 7 through 12, 2005. Partnership for a Drug-Free America; May 16, 2006. Report available online at http://www.drugfree.org/Files/Full_Teen_Report

Research and education efforts need to target:

- Patients who may overuse out of ignorance or attempts to control pain, stress, anxiety, depression or another co-existing disorder such as insomnia.
- New experimental abusers, many of them young, who view pain medication as safer than street drugs and who need to know that prescription opiates act in the body like heroin does.
- People with a history or continuing habits of using illicit drugs and nonmedical pharmaceuticals. This group includes people who are medically addicted.

Each group has different knowledge deficits and different informational needs.

Needed Research:

To understand what went wrong in the overdose deaths, we must shift some of the focus from the drug itself to the decedents and find out what they have in common. The data

are incomplete. Were they taking the medication as directed? In combination with other substances? Recreationally or seeking greater pain relief? Did they have common psychiatric diagnoses or physical characteristics such as a similar BMI or sleep apnea?

To investigate deaths resulting from poisoning or overdose of drugs in Utah, to include:

- A standard medical examiner toxicological assay on each decedent
- Review of vital statistics and medical records (available through the Utah Department of Health)
- Interviews with the decedent's next of kin conducted by trained researchers
- Interviews with the decedent's primary physician (when known)
- Interviews with any identified prescribers of controlled substances to the decedent
- Review of relevant medical records during the year prior to death

Investigation results should be collected systematically and completely and also collect supplementary information about the decedent. Data should be entered into a secure database maintained at the Utah Department of Health and disclosed only in summary form that cannot be used to identify an individual.

The primary focus of the study would be prescription opioids, the methodology would also provide information about illicit drug deaths (heroin) which are also an important Utah and national problem.

Information to be gathered through toxicological assays and interviews:

Primary and contributing causes of death	Prior substance abuse treatment
Circumstances of death	Medical prescribing practices of physician
Manner of death (i.e. accident vs. suicide)	Sources of drugs or medications

Age, gender, race/ethnicity	Awareness of risk by relatives and friends
Time and place of death	Reason for use (pain vs. recreational or other)
Mgs of opioids taken	Interactions with other medications
History of substance abuse	Interactions with alcohol and illicit drugs
History of mental illness/psychiatric problems	Amount of prescription remaining at time of death
History of chronic pain, severity, type, and location of pain; medical conditions, surgeries, and accidents	Extent to which opioids were found a) alone, b) combined with other prescription drugs, c) combined with alcohol or d) combined with street drugs
Source of opioids if not prescription (i.e. thefts, forgeries, obtained from family or friend, etc.)	Blood levels of concomitant medications, particularly benzodiazepines
Particular formulation of opioids (i.e. tablets vs. liquid)	Presence of sleep apnea
Decedent insurance status and type	

Summary:

- **Conduct research to isolate causes and craft interventions to stop abuse and overdose.**
- **Understand patterns of patient and prescriber error and nonmedical abuse.**
- **Discover most common sources of diverted pharmaceuticals in Utah**
- **Use tools such as patient and prescriber education, partnerships with pharmacists, regulators and law enforcement, the controlled substances database (used to inform, not intimidate).**
- **Ask the right questions; isolate target groups, disseminate useful information.**