Prescription Drug Trafficking Trends, Synthetic Drugs and Methamphetamine

American Society of Interventional Pain Physicians

Crystal City, Virginia
June 9, 2012
Disclosure Information

I have no financial relationships to disclose

AND

I will not discuss off-label use and/or investigational drug use in my presentation
• Responding to America’s Prescription Drug Abuse Crisis

• “When Two Addictions Collide”
“In 2007, approximately 27,000 unintentional drug overdose deaths occurred in the United States, one death every 19 minutes. Prescription drug abuse is the fastest growing drug problem in the United States.”

Number of unintentional drug overdose deaths involving opioid analgesics, cocaine, and heroin — United States, 1999–2007

Legend Drugs v.
Controlled Substances
## Prescription Requirements

<table>
<thead>
<tr>
<th></th>
<th>Schedule II</th>
<th>Schedule III</th>
<th>Schedule IV</th>
<th>Schedule V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oral</td>
<td>Emergency Only*</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Facsimile</td>
<td>Yes**</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Refills</td>
<td>No</td>
<td>Yes#</td>
<td>Yes#</td>
<td>Yes#</td>
</tr>
<tr>
<td>Partial Fills</td>
<td>Yes***</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Must be reduced in writing, and followed by sign, hard copy of the prescription.

** A signed, hard copy of the prescription must be presented before the medication is dispensed.

*** 72 hour time limitation.

# With medical authorization, up to 5 in 6 months.
Prescription drug epidemic? How did we get to this point?
The 1990s

OxyContin
Inadequate Pain Control
Commonly Abused Controlled Pharmaceuticals

Carisoprodol

Oxycodone 30 mg

Hydrocodone

OxyContin 80mg

Oxymorphone

Oxycodone 30 mg

Alprazolam

Cyclobenzaprine (Flexeril)

C-IV as of 1/11/2012
Direct to consumer advertising
The Perfect Storm

- Industry is producing a wider variety of controlled substance pharmaceuticals and practitioners are prescribing more.
- Use of Medicare / Medicaid or insurance to fund drug habits
- Information / Electronic era
The Controlled Substances Act

Checks and Balances
The Flow of Pharmaceuticals

Raw Material

Importers

Manufacturers

Dosage Form Manufacturers

Imp - Manufacturers

Dosage Form Manufacturers

Wholesalers - Distributors

Smaller Distributors

Hospitals

Pharmacies

Physicians (Rx and drugs)

NTPs

Quotas

21 USC 823(c)(1)
21 USC 823(d)(1)
21 CFR 1301.71

21 USC 823(b)(1)
21 USC 823(e)(1)
21 CFR 1301.71
21 CFR 1301.74
(Suspicious Orders)

21 CFR 1306.04

Patients
Checks and Balances of the CSA and the Regulatory Scheme

• **Distributors of controlled substances**

“The registrant shall design and operate a system to disclose to the registrant suspicious orders of controlled substances…Suspicious orders include orders of unusual size, orders deviating substantially from a normal pattern, and orders of unusual frequency.” (21 CFR § 1301.74)
Checks and Balances
Under the CSA

• Practitioners

“A prescription for a controlled substance to be effective must be issued for a legitimate medical purpose by an individual practitioner acting in the usual course of professional practice.” (21 CFR § 1306.04(a))

United States v Moore 423 US 122 (1975)
Checks and Balances
Under the CSA

• Pharmacists – The Last Line of Defense

“The responsibility for the proper prescribing and dispensing of controlled substances is upon the practitioner, but a corresponding responsibility rests with the pharmacist who fills the prescription.” (21 CFR § 1306.04(a))
What can happen when these checks and balances collapse and diversion occurs?
Large-Scale Diversion

• In 2009, the average purchase for all oxycodone products for all pharmacies in US - 63,294 d.u.

• In 2010, the average was - 69,449 d.u.

• In 2009, the average purchase for all oxycodone products for the top 100 pharmacies in Florida - 1,226,460 d.u.

• In 2010, the average was - 1,261,908 d.u.
Purchases of Oxycodone 30mg

- In 2009, 44% of all oxycodone 30mg products were distributed to Florida
- In 2010, 43% of all oxycodone 30mg products were distributed to Florida
COLUMBUS, Ohio — A Chicago doctor who prosecutors say dispensed more of the powerful painkiller oxycodone from 2003 to 2005 than any other physician in the country was sentenced Tuesday to four life terms in the overdose deaths of four patients.

Dr. Paul Volkman made weekly trips from Chicago to three locations in Portsmouth in southern Ohio and one in Chillicothe in central Ohio before federal investigators shut down the operations in 2006, prosecutors said. He was sentenced in federal court in Cincinnati.

"This criminal conduct had devastating consequences to the community Volkman was supposed to serve," Assistant U.S. Attorneys Adam Wright and Tim Oakley said in a court filing ahead of Tuesday's hearing.

"Volkman's actions created and prolonged debilitating addictions; distributed countless drugs to be sold on the street; and took the lives of numerous individuals who died just days after visiting him," they said. The 64-year-old Volkman fired his attorneys earlier this month and said he acted at all times as a doctor, not a drug dealer.

"The typical drug dealer does not care how much drugs a client buys, how often he buys, or what he does with his drugs," Volkman said in a 28-page handwritten court filing Monday, maintaining that he did all those things and more for his patients.
Prescriptions like candy

The story of a Duarte doctor makes it clear that a lot can go wrong between the handcuffs and the prison time.

SANDY BANKS

We're getting tough on drug dealers in Los Angeles these days, sweeping crack sellers off the streets, shutting down marijuana dispensaries, prosecuting doctors who peddle prescriptions like candy to patient addicts.

But the story of Dr. Daniel Healy makes it clear that a lot can go wrong between the handcuffs and the prison time.

Healy, according to prosecutors, is a prolific drug dealer. In 2008 alone, he illegally distributed enough prescription drugs to constitute the federal government's equivalent of more than 50,000 doses of cocaine or 37,000 pounds of marijuana.

The Duarte physician ordered more Vicodin than any doctor in the nation — 1 million pills in 2008. That's 10 times the stockpile of any average pharmacy; more than his local CVS, Wal-Mart, Target and City of Hope pharmacies combined.

According to federal legal briefs, Healy made so many over-the-counter sales from his "Kind Care" medical clinic, the office had its own money-counting machine and Healy pocketed $3,000 to $6,000 a day.

On the day he was arrested, police pulled over a ghetto street dealer with a wash of cash and pocketful of crack cocaine.

That guy would have recouped a mandatory five years in prison for selling as little as five grams of crack.

Healy's lawyer argued that a lengthy term in jail was "not necessary to deter Dr. Healy from engaging in future criminal conduct, or to protect the public from his future criminal acts."

Attorney Roger Rosen called his client a "gifted healer who provided quality medical care" to a working-class community with few options for affordable care.

The prosecutors, drawing on an investigation by Monrovia police and the Drug Enforcement Administration, painted a far different picture.

Healy operated in two ways: writing prescriptions for his patients to fill, or more commonly by selling pills directly from his clinic to any customers who could pay. Those customers often dealt the medication on the streets and came back for more.

Healy's dealings became so blatant, local pharmacies refused to fill prescriptions he wrote for his patients' prescriptions because they came in so often, investigators discovered. The quantity of controlled substances and patients tended to pay in cash for the drugs.

Investigators matched his inventory against his pharmacy orders and pre-prescription records couldn't account for 890,296 of the pills he ordered the year before he was arrested, court papers said.

Healy's Kind Care clinic was little more than a "narcotics mill" that netted him almost $700,000 in one year: a cash-and-carry narcotics store under the guise of providing legitimate medical treatment.

The prosecutor in the case stopped short of saying he's disappointed when I interviewed him Monday.

"Forty-eight months is a significant sentence, by any measure," said Assistant U.S. Atty. David Herzog.

The felony conviction means Healy will lose his license. "The end result is that this defendant is not longer able to distribute narcotics to the community and never will again."

But 48 months is considerably less than the 210-month minimum term the probation report recommended. It's less, even, than the 57 months Healy's lawyer suggested would be fair. That's a blow to DEA efforts to crack down on abuse of prescription drugs, which is rising among teens and young adults.

Nearly 7 million Americans are abusing pharmaceutical drugs — up from 3.8 million 10 years ago, and more than the number addicted to cocaine, heroin and hallucinogens. Opioid painkillers — the kind Healy dispensed — cause more overdose deaths than cocaine and heroin combined.

Blatant drug-dealing by doctors is rare. More common is doctor-shopping by patients, thefts from pharmacies, trading meds by addicts and over-the-counter sales by drug dealers.

That's why Healy's sentence is so disappointing.

Here's a chance to send a message to "well-meaning" doctors like Healy who might be tempted by easy money and to suffering patients who might not realize that the mild-mannered guy with the stethoscope might have more than their well-being in mind.
Burden on the health care delivery system
What is the Societal Damage?
2009 Current Users 2010

**ANY ILLICIT DRUG:**
- 21.8 million
  (8.7% of population)

**MARIJUANA:** 16.7 million

**PSYCHOTHERAPEUTIC DRUGS:** 7 million

**COCAINE:** 1.6 million

**Hallucinogens:** 1.3 million

**METHAMPHETAMINE:** 502,000

Source: 2009 & 2010 NSDUH

**ANY ILLICIT DRUG:**
- 22.6 million
  (8.9% of population)

**MARIJUANA:** 17.4 million

**PSYCHOTHERAPEUTIC DRUGS:** 7 million

**COCAINE:** 1.5 million

**Hallucinogens:** 1.2 million

**METHAMPHETAMINE:** 353,000
More Americans abuse prescription drugs than the number of:

Cocaine, Hallucinogen, Heroin, and Inhalant abusers COMBINED!!!
Scope and Extent of Problem

Percentage of Past Month Nonmedical Use of Psychotherapeutics by Age, 2003-2009

Source: National Survey on Drug Use and Health
Violence
Violence Related to Controlled Substance Pharmaceuticals

ASSASSIN

Chilling anatomy of drugstore massacre

PAIN KILLER

DRUGSTORE MASSACRE

Husband and wife busted in Rx-slay horror
Robbery suspect, federal agent killed in Seaford

A robbery suspect and a federal agent who had dropped by to pick up a prescription for his ailing father both died of gunshot wounds Dec. 31, 2011, after police struggled with the suspect in the doorway of a Seaford pharmacy.

Be the first to rate: ★★★★★ Click to rate

Related

Nassau
Cops: Fatal shooting at Seaford drugstore

Nassau police respond to the scene of a shooting Saturday at Charlie’s Family Pharmacy, 3931 Merrick Rd., in Seaford. (Dec. 31, 2011) Photo Credit: Kevin P. Coughlin
What two fourth-grade teachers at Westchase Elementary School apparently thought was a creative way to calm students about to take the FCAT made at least one caregiver fear the teachers were sending a different message— that taking drugs while under stress is OK.

Sandy Young walked into her grandson's fourth-grade classroom last Thursday and saw pill bottles on each students' desk. Her mind raced with questions and thoughts of disbelief.

Young said she immediately questioned Westchase Elementary fourth-grade teacher Beth Watson about the pill bottles, which were filled with pieces of small mint candy.

"She said it was nothing but some mints; it was just something special for the kids, for the FCAT to mellow them out," Young said.

Young said she was shocked and speechless and walked out of the room when Watson started the students on a math assignment.

Young said the pill bottles go against the lessons of teaching children to say no to drugs.

"We turn around and we have our teachers giving them drugs," said Young, 60, of Tampa. "I don't care if it's mints or not. ... If it's in a prescription bottle, it's a drug."

Young said the bottle reads in part: "Watson's Whiz Kid Pharmacy. Take 1 tablet by mouth EVERY 5 MINUTES to cure FCAT jitters. Repeated use may cause craft to spontaneously ooze from pores. No refills. Ms. (Deborah) Falcon's authorization required."

The school received one complaint since pill bottles were distributed on Thursday, said Linda Cobbe, a school district spokeswoman. It's believed only two fourth-grade teachers at the school distributed the pill bottles.

The principal met with the students on Monday to confirm the pill bottles contained mints that were safe to eat. The students were asked to dump the mints in a separate container and the pill bottles were thrown away, Cobbe said.

She said the bottle idea was tied to the children's book the students recently read, "George's Marvelous Medicine," about a boy who concocts potions to try to change the disposition of his cranky grandmother.

The teachers were just trying to use a creative way to get across to the students not to be stressed with the FCAT writing examination that will be administered to fourth-, eighth- and 10th-graders beginning today, Cobbe said.

"Elementary teachers do creative things to make learning fun," Cobbe said.

The teachers won't be disciplined, and it wasn't their intention to promote drug use, Cobbe said.

"I know that is not the intent of the teachers," Cobbe said. "That is not the outcome they would wish for."

Young said her grandson has been at Westchase Elementary for a year, and she hasn't had any complaints. But this experience has soured her.

It concerns her that now someone might hand her grandson a pill bottle with drugs and he might think it's OK to consume its contents.

"We as parents and grandparents have to drill it into them that this is unacceptable and hope and pray that they don't accept drugs from someone else," Young said.
Past Year Initiates for Specific Drugs
Persons Aged 12 or Older 2010

Avg. 5,490 persons per day initiating with pain relievers
Psychotherapeutics Include: Pain Relievers, Tranquilizers, Stimulants, and Sedatives

Source: 2010 NSDUH

New Initiates 2010 - 12 years and older

Avg. 6,600 new initiates per day for psychotherapeutic drugs

Gateway is gone
Emergency Room Data 2004-2009

- Increase of 98.4%: ER visits attributable to pharmaceuticals alone (i.e., with no other type of drug or alcohol) (627,291 to 1,244,679)
  - No Significant Change: ER visits attributable to cocaine, heroin, marijuana, or methamphetamine

- Rx Drugs most frequently implicated:
  - Opiates/Opioids pain relievers
    - Oxycodone products 242.2% increase
    - Hydrocodone products 124.5% increase
    - Fentanyl products 117.5% increase
  - Insomnia or Anti-Anxiety medications
    - Zolpidem 154.9% increase
    - Alprazolam 148.3% increase
    - Clonazepam 114.8% increase
  - Carisoprodol 100.6% increase
  - For patients aged 20 and younger misuse/abuse of pharmaceuticals increased 45.4%
  - For patients aged 20 and older the increase was 111%

Poisoning Deaths: Opioid Analgesics

Source: CDC/NCHS, National Vital Statistics System
Number of Forensic Cases 2001-2010

NFLIS
Estimated U.S. Law Enforcement Encounters

- Methadone
- Oxycodone
- Hydrocodone

Year: 2001-2010

- Methadone: 253%
- Oxycodone: 281%
- Hydrocodone: 331%
National Poison Data Center
Number of U.S. Poison Exposure Case Mentions
2004 - 2008

Source: American Association of Poison Control Centers (AAPCC) Annual Reports, 2004-2008
Statistical Perspective

The U.S. Population Grows at a Rate of Less Than 1% Per Year!

Source: U.S. Census Bureau
## Sources of Information and Risks

<table>
<thead>
<tr>
<th>% Learned a lot about risks of drugs from...</th>
<th>1998</th>
<th>2004</th>
<th>2005</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>41</td>
<td>42</td>
<td>38</td>
<td>37</td>
<td>44</td>
<td>39*</td>
</tr>
<tr>
<td>Parents</td>
<td>26</td>
<td>28</td>
<td>28</td>
<td>29</td>
<td>35</td>
<td>31</td>
</tr>
<tr>
<td>TV Commercials</td>
<td>17</td>
<td>36</td>
<td>26</td>
<td>31</td>
<td>31</td>
<td>26*</td>
</tr>
<tr>
<td>The Internet</td>
<td>11</td>
<td>23</td>
<td>22</td>
<td>25</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Websites like YouTube</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>14</td>
<td>17*</td>
</tr>
</tbody>
</table>

* = Significant at the .05 level vs 2008

Source: Partnership for Drug Free America, March 2, 2010
## Teens and Their Attitudes

<table>
<thead>
<tr>
<th>% Agree strongly/somewhat</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription drugs are available everywhere</td>
<td>42</td>
<td>55</td>
<td>38</td>
</tr>
<tr>
<td>Its easy to get prescription drugs from parent’s medicine cabinets</td>
<td>56</td>
<td>63</td>
<td>47</td>
</tr>
<tr>
<td>Most teens get prescription drugs from their own family’s medicine cabinets</td>
<td>59</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>Most teens get prescription drugs from their friends</td>
<td>53</td>
<td>62</td>
<td>49</td>
</tr>
</tbody>
</table>
Where do kids get their information from?
Parents and Their Attitudes

Parents are still not discussing the risks of abusing prescription and over-the-counter medicines

<table>
<thead>
<tr>
<th>Percent</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer/alcohol</td>
<td>79</td>
<td>79</td>
<td>81</td>
</tr>
<tr>
<td>Marijuana</td>
<td>79</td>
<td>79</td>
<td>77</td>
</tr>
<tr>
<td>Cocaine/crack</td>
<td>36</td>
<td>35</td>
<td>30</td>
</tr>
<tr>
<td>Prescription pain reliever w/o doctor’s Rx</td>
<td>20</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>Any prescription drug used w/o doctor’s Rx</td>
<td>21</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Heroin</td>
<td>23</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>21</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>23</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Non-prescription cold/cough medicine to get high</td>
<td>15</td>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>
Who are the Victims of Prescription Drug Abuse

- The drug abuser
- Children
- Parents / Family members
- Society / Taxpayer
  - Loss of productivity
  - Cost of uncompensated medical costs
  - Cost of social services
  - Costs for treatment
  - Cost to judicial system
Economic Impact – The Cascading Effect

2006 estimated cost in the United States from nonmedical use of prescription opioids

$53.4 BILLION

- $42 billion – Lost productivity
- $8.2 billion – Criminal Justice costs
- $2.2 billion – Treatment costs
- $944 million – Medical complications

Five drugs – OxyContin, oxycodone, hydrocodone, propoxyphene, and methadone accounted for two-thirds of the economic burden

Source: Clinical Journal of Pain, December 2010, University of Washington, Hansen RN; Oster, G; Edelberg, J; Woody, GE; and Sullivan, SD
We will not arrest our way out of this problem!!!!!

- Enforcement is just as important as....
- Prevention/Education
- Treatment
ONDCP Strategy

“Epidemic: Responding To America’s Prescription Drug Abuse Crisis” (Released in April 2011)

Highlights:
• Education
  • Healthcare Provider Education
  • Parent, Youth, and Patient Education
• Tracking and Monitoring
  – Work with states to establish effective PDMPs
  – Support NASPER
  – Explore reimbursements to prescribers who check PDMPs before writing a prescription
ONDCP Strategy con’t

• Proper Medicine Disposal

• Enforcement
  – Assist states address doctor shopping and pill mills
  – Increase HIDTA intelligence-gathering and investigation of prescription drug trafficking
  – Expand the use of PDMPs to identify criminal prescribers and clinics

• Prescription Drug Abuse Plan Goals
  – 15% reduction in non-medical use of prescription-type psychotherapeutic drugs;
  – Write and disseminate a Model Pain Clinic Regulation Law within 12 months;
  – Implement REMS for long-acting and extended release opioids within 12 months
Most Frequent Method of Obtaining a Pharmaceutical Controlled Substance for Non Medical Use

Friends and Family...For Free!!
The Medicine Cabinet and the Problem of Pharmaceutical Controlled Substance Disposal
The Problem – Easy Access
CSA Definitions

• An “ultimate user” is a person who has lawfully obtained, and who possesses, a controlled substance for his own use or for the use of a member of his household or for an animal owned by him or by a member of his household.

• To distribute means to deliver (other than by administering or dispensing) a controlled substance or a listed chemical.

21 U.S.C. 802
Ultimate User Disposal of Medicines

**National Take-Back Events:** Take-back events are a good way to remove expired, unwanted, or unused medicines from the home.

**Law Enforcement Collection Bins:** Collection bins installed by our Law Enforcement Partners are a good way to remove expired, unwanted, or unused medicines from the home.

**Disposal in Household Trash:** Mix medicines (do not crush tablets or capsules) with substances such as kitty litter or used coffee grounds and place the mixture in a container such as a sealed plastic bag and throw the container in your household trash.

**Disposal by Flushing:** Some medicines have specific disposal instructions that indicate they should be flushed down the sink or toilet when they are no longer needed.
Law Enforcement

- Law enforcement officers, acting to enforce laws regarding the abandonment of controlled substances, may receive controlled substances from ultimate users.

- Law enforcement must safeguard the controlled substances and ensure that they are destroyed properly.

- Law enforcement must be present during the destruction of the controlled substances.
So Many Drugs in the Household – Why?

- Unreasonable quantities being prescribed
- Insurance rules
Got Drugs?

Turn in your unused or expired medication for safe disposal Saturday, Sept 29, 2012

Click here for a collection site near you.
Nationwide Take-back Initiative

- On **September 30, 2010**, **122 tons** of prescription drugs collected
- On **April 30, 2011**, **188 tons** of prescription drugs collected
- On **October 29, 2011**, **189 tons** of prescription drugs collected
- On **April 28, 2012**, approximately **272 tons** of prescription drugs collected (est.)
Secure and Responsible Drug Disposal Act of 2010

- Enacted in October 2010 (Pub. L. 111-273, codified at 21 U.S.C. 822(g) and 823(b)(3))
- Act allows an ultimate user to “deliver” a controlled substance “to another person for the purpose of disposal” in accordance with regulations issued by DEA
- If the ultimate user dies while in lawful possession of the controlled substance, then any person lawfully entitled to dispose of the decedent’s property may deliver the controlled substance to another person for the purpose of disposal.
- DEA may also, by regulation, authorize long term care facilities (LTCFs) to dispose of controlled substances on behalf of ultimate users who reside or have resided at the LTCF.
- DEA is working to promulgate regulations to implement this Act. DEA must consider:
  - Public health and safety
  - Ease and cost of program implementation
  - Participation by various communities
  - Diversion Control
- Participation is voluntary. DEA may not require any person to establish or operate a delivery or disposal program.
ONDCP Guidelines

- ONDCP guidelines for the disposal of ultimate user medications, including dispensed controlled substances (2/20/07).

- Advise public to flush medications only if the prescription label or accompanying patient information specifically states to do so.

- ONDCP recommends a minimal deactivation procedure, and disposal in common household trash.
PROZAC (?) FISH
MEDICINES RECOMMENDED FOR DISPOSAL BY FLUSHING

This list from FDA tells you what expired, unwanted, or unused medicines you should flush down the sink or toilet to help prevent danger to people and pets in the home. Flushing these medicines will get rid of them right away and help keep your family and pets safe.

FDA continually evaluates medicines for safety risks and will update the list as needed.

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Active Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstral, tablets (sublingual)</td>
<td>Fentanyl</td>
</tr>
<tr>
<td>Actiq, oral transmucosal lozenge</td>
<td>Fentanyl Citrate</td>
</tr>
<tr>
<td>Avinza, capsules (extended release)</td>
<td>Morphine Sulfate</td>
</tr>
<tr>
<td>Daytrana, transdermal patch system</td>
<td>Methylphenidate</td>
</tr>
<tr>
<td>Demerol, tablets *</td>
<td>Meperidine Hydrochloride</td>
</tr>
<tr>
<td>Demerol, oral solution *</td>
<td>Meperidine Hydrochloride</td>
</tr>
<tr>
<td>Dilatid/Dilatid AcuDial, rectal gel</td>
<td>Diazepam</td>
</tr>
<tr>
<td>Dilaudid, oral liquid *</td>
<td>Meperidine Hydrochloride</td>
</tr>
<tr>
<td>Dolophine Hydrochloride, tablets</td>
<td>Hydromorphone Hydrochloride</td>
</tr>
<tr>
<td>Duragesic, patch (extended release) *</td>
<td>Fentanyl</td>
</tr>
<tr>
<td>Embeda, capsules (extended release)</td>
<td>Morphine Sulfate; Naltrexone Hydrochloride</td>
</tr>
<tr>
<td>Exalgo, tablets (extended release)</td>
<td>Hydromorphone Hydrochloride</td>
</tr>
<tr>
<td>Fentora, tablets (buccal)</td>
<td>Fentanyl Citrate</td>
</tr>
<tr>
<td>Kadian, capsules</td>
<td>Morphine Sulfate</td>
</tr>
<tr>
<td>Methadone Hydrochloride, oral solution *</td>
<td>Methadone Hydrochloride</td>
</tr>
<tr>
<td>Morphine Sulfate, tablets</td>
<td>Morphine Sulfate</td>
</tr>
<tr>
<td>Morphine Sulfate, oral solution *</td>
<td>Morphine Sulfate</td>
</tr>
<tr>
<td>M S Contin. tablets (extended release) *</td>
<td>Morphine Sulfate</td>
</tr>
<tr>
<td>Nucynta ER, tablets</td>
<td>Tapentadol</td>
</tr>
<tr>
<td>Omosol, soluble film (buccal)</td>
<td>Fentanyl Citrate</td>
</tr>
<tr>
<td>Opana, tablets (immediate release)</td>
<td>Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Opana ER, tablets (extended release)</td>
<td>Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Oramorph SR, tablets (sustained release)</td>
<td>Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Oxyacta, tablets (immediate release)</td>
<td>Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Oxycontin, tablets (extended release) *</td>
<td>Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Percocet, tablets *</td>
<td>Acetaminophen; Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Percodan, tablets *</td>
<td>Aspirin; Oxycodone Hydrochloride</td>
</tr>
<tr>
<td>Xyrem, oral solution</td>
<td>Sodium Oxybate</td>
</tr>
</tbody>
</table>

*These medicines have generic versions available or are only available in generic formulations.

List revised: January 2012

*Consumers are advised to check their local laws and ordinances to make sure medicines can legally be disposed of with their household trash.

For specific drug product labeling information, go to DailyMed or Drugs@FDA.
Other Trends Related to the Medicine Cabinet

• Real estate
• Trip to relatives/friends house
• Easy access at home
Controlled and Legend Pharmaceuticals
Non-Controlled Substances

- **Analgesic:**
  - Tramadol (Ultram®, Ultracet®)

- **Muscle Relaxant:**
  - Cyclobenzaprine (Flexeril®)
Tramadol Prescriptions

Source: IMS Health National Prescription Audit Plus downloaded 6/5/2012
NFLIS Data

Reporting period:

January 2011 through June 2011

Tramadol 720 reports 1.09%
Most commonly prescribed prescription medicine?

Hydrocodone/acetaminophen
Top Five Prescription Drugs Sold in the U.S. (2006-2010)

(By Number of Prescriptions Sold)

Source: IMS Health

- **2006**: 112,400,000
- **2007**: 119,200,000
- **2008**: 124,100,000
- **2009**: 128,200,000
- **2010**: 131,200,000
## Top 50 Generic Drugs by Total Prescriptions 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Drug</th>
<th>Total Rxs</th>
<th>Change from Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hydrocodone/APAP</td>
<td>122,806,850</td>
<td>2.10%</td>
</tr>
<tr>
<td>2</td>
<td>Lisinopril</td>
<td>76,901,813</td>
<td>4.30%</td>
</tr>
<tr>
<td>3</td>
<td>Simvastatin</td>
<td>76,771,821</td>
<td>4.90%</td>
</tr>
<tr>
<td>4</td>
<td>Levothyroxine</td>
<td>68,222,152</td>
<td>8.20%</td>
</tr>
<tr>
<td>5</td>
<td>Amoxicillin</td>
<td>51,083,822</td>
<td>-0.60%</td>
</tr>
<tr>
<td>6</td>
<td>Amlodipine besylate</td>
<td>50,186,652</td>
<td>11.70%</td>
</tr>
<tr>
<td>7</td>
<td>Azithromycin</td>
<td>48,756,188</td>
<td>-2.10%</td>
</tr>
<tr>
<td>8</td>
<td>Alprazolam</td>
<td>46,201,182</td>
<td>3.90%</td>
</tr>
<tr>
<td>9</td>
<td>Hydrochlorothiazide</td>
<td>45,838,017</td>
<td>-0.80%</td>
</tr>
<tr>
<td>10</td>
<td>Metformin</td>
<td>44,932,689</td>
<td>4.70%</td>
</tr>
<tr>
<td>11</td>
<td>Furosemide oral</td>
<td>36,583,895</td>
<td>-0.10%</td>
</tr>
<tr>
<td>12</td>
<td>Metoprolol tartrate</td>
<td>34,707,807</td>
<td>-0.50%</td>
</tr>
<tr>
<td>13</td>
<td>Metoprolol succinate</td>
<td>32,224,000</td>
<td>12.00%</td>
</tr>
<tr>
<td>14</td>
<td>Atenolol</td>
<td>33,839,806</td>
<td>-11.00%</td>
</tr>
<tr>
<td>15</td>
<td>Sertraline</td>
<td>33,409,838</td>
<td>8.90%</td>
</tr>
<tr>
<td>16</td>
<td>Omeprazole</td>
<td>31,795,175</td>
<td>15.40%</td>
</tr>
<tr>
<td>17</td>
<td>Paroxetine</td>
<td>30,026,786</td>
<td>12.00%</td>
</tr>
<tr>
<td>18</td>
<td>Oxycodeine/APAP</td>
<td>28,705,243</td>
<td>6.80%</td>
</tr>
<tr>
<td>19</td>
<td>Citalopram HBR</td>
<td>27,993,635</td>
<td>9.40%</td>
</tr>
<tr>
<td>20</td>
<td>Gabapentin</td>
<td>26,865,557</td>
<td>14.00%</td>
</tr>
<tr>
<td>21</td>
<td>Ibuprofen</td>
<td>26,256,548</td>
<td>3.20%</td>
</tr>
<tr>
<td>22</td>
<td>Prednisone oral</td>
<td>25,529,463</td>
<td>-2.70%</td>
</tr>
<tr>
<td>23</td>
<td>Tramadol</td>
<td>25,527,796</td>
<td>10.30%</td>
</tr>
<tr>
<td>24</td>
<td>Lisinopril/HCTZ</td>
<td>24,538,247</td>
<td>8.00%</td>
</tr>
<tr>
<td>25</td>
<td>Fluoxetine</td>
<td>24,473,994</td>
<td>6.80%</td>
</tr>
<tr>
<td>26</td>
<td>Lorazepam</td>
<td>23,428,627</td>
<td>3.70%</td>
</tr>
<tr>
<td>27</td>
<td>Warfarin</td>
<td>23,388,338</td>
<td>1.50%</td>
</tr>
<tr>
<td>28</td>
<td>Clonazepam</td>
<td>23,085,065</td>
<td>4.00%</td>
</tr>
<tr>
<td>29</td>
<td>Fluticasone nasal</td>
<td>22,447,832</td>
<td>19.70%</td>
</tr>
<tr>
<td>30</td>
<td>Cyclobenzaprine</td>
<td>22,240,071</td>
<td>7.30%</td>
</tr>
<tr>
<td>31</td>
<td>Cephalexin</td>
<td>21,943,482</td>
<td>2.70%</td>
</tr>
<tr>
<td>32</td>
<td>Trimethoprim/sulfa</td>
<td>21,345,723</td>
<td>4.50%</td>
</tr>
<tr>
<td>33</td>
<td>Fexofenadine</td>
<td>20,430,430</td>
<td>27.50%</td>
</tr>
<tr>
<td>34</td>
<td>Amoxicillin/pot clav</td>
<td>20,234,873</td>
<td>1.20%</td>
</tr>
<tr>
<td>35</td>
<td>Ciprofloxacin HCl</td>
<td>20,063,382</td>
<td>1.80%</td>
</tr>
<tr>
<td>36</td>
<td>Pravastatin</td>
<td>20,026,786</td>
<td>17.90%</td>
</tr>
<tr>
<td>37</td>
<td>Trazodone HCl</td>
<td>18,786,495</td>
<td>6.50%</td>
</tr>
<tr>
<td>38</td>
<td>Lovastatin</td>
<td>17,509,951</td>
<td>13.50%</td>
</tr>
<tr>
<td>39</td>
<td>Triamterene/HCTZ</td>
<td>17,201,037</td>
<td>-7.00%</td>
</tr>
<tr>
<td>40</td>
<td>Carvedilol</td>
<td>16,681,336</td>
<td>8.30%</td>
</tr>
<tr>
<td>41</td>
<td>Alendronate</td>
<td>16,177,014</td>
<td>-6.90%</td>
</tr>
<tr>
<td>42</td>
<td>Ranitidine HCl</td>
<td>14,699,414</td>
<td>6.60%</td>
</tr>
<tr>
<td>43</td>
<td>Meloxicam</td>
<td>14,645,167</td>
<td>2.90%</td>
</tr>
<tr>
<td>44</td>
<td>Diazepam</td>
<td>14,584,147</td>
<td>7.10%</td>
</tr>
<tr>
<td>45</td>
<td>Naproxen</td>
<td>14,297,759</td>
<td>10.30%</td>
</tr>
<tr>
<td>46</td>
<td>Propoxyphene-N/APAP</td>
<td>14,274,354</td>
<td>-18.70%</td>
</tr>
<tr>
<td>47</td>
<td>Fluconazole</td>
<td>13,938,887</td>
<td>4.60%</td>
</tr>
<tr>
<td>48</td>
<td>Methylprednisolone tabs</td>
<td>13,659,852</td>
<td>11.30%</td>
</tr>
<tr>
<td>49</td>
<td>Doxycycline</td>
<td>13,199,430</td>
<td>1.90%</td>
</tr>
<tr>
<td>50</td>
<td>Paroxetine</td>
<td>12,979,366</td>
<td>-14.40%</td>
</tr>
</tbody>
</table>
# Top 50 Generic Drugs by Total Prescriptions 2009

<table>
<thead>
<tr>
<th>Rank</th>
<th>Drug</th>
<th>Total Rxs</th>
<th>Change from Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hydrocodone/APAP</td>
<td>120,478,000</td>
<td>-0.60%</td>
</tr>
<tr>
<td>2</td>
<td>Lisinopril</td>
<td>74,544,000</td>
<td>6.80%</td>
</tr>
<tr>
<td>3</td>
<td>Simvastatin</td>
<td>72,966,000</td>
<td>21.30%</td>
</tr>
<tr>
<td>4</td>
<td>Levothyroxine</td>
<td>63,710,000</td>
<td>8.70%</td>
</tr>
<tr>
<td>5</td>
<td>Amoxicillin</td>
<td>51,430,000</td>
<td>-1.20%</td>
</tr>
<tr>
<td>6</td>
<td>Azithromycin</td>
<td>49,902,000</td>
<td>1.30%</td>
</tr>
<tr>
<td>7</td>
<td>Hydrochlorothiazide</td>
<td>46,403,000</td>
<td>-1.40%</td>
</tr>
<tr>
<td>8</td>
<td>Amlodipine besylate</td>
<td>45,107,000</td>
<td>15.60%</td>
</tr>
<tr>
<td>9</td>
<td>Alprazolam</td>
<td>44,467,000</td>
<td>2.00%</td>
</tr>
<tr>
<td>10</td>
<td>Metformin</td>
<td>42,161,000</td>
<td>5.30%</td>
</tr>
<tr>
<td>11</td>
<td>Omeprazole</td>
<td>38,791,000</td>
<td>33.00%</td>
</tr>
<tr>
<td>12</td>
<td>Atenolol</td>
<td>37,973,000</td>
<td>-7.20%</td>
</tr>
<tr>
<td>13</td>
<td>Furosemide oral</td>
<td>36,774,000</td>
<td>-1.80%</td>
</tr>
<tr>
<td>14</td>
<td>Metoprol tartrate</td>
<td>36,016,000</td>
<td>21.40%</td>
</tr>
<tr>
<td>15</td>
<td>Sertraline</td>
<td>30,508,000</td>
<td>3.50%</td>
</tr>
<tr>
<td>16</td>
<td>Zolpidem tartrate</td>
<td>30,081,000</td>
<td>6.20%</td>
</tr>
<tr>
<td>17</td>
<td>Metoprol succinate</td>
<td>27,884,000</td>
<td>-28.30%</td>
</tr>
<tr>
<td>18</td>
<td>Oxycodone w/APAP</td>
<td>27,238,000</td>
<td>3.80%</td>
</tr>
<tr>
<td>19</td>
<td>Prednisone oral</td>
<td>26,291,000</td>
<td>6.20%</td>
</tr>
<tr>
<td>20</td>
<td>Citalopram HBR</td>
<td>25,856,000</td>
<td>19.90%</td>
</tr>
<tr>
<td>21</td>
<td>Ibuprofen</td>
<td>25,728,000</td>
<td>0.70%</td>
</tr>
<tr>
<td>22</td>
<td>Fluoxetine</td>
<td>23,417,000</td>
<td>0.60%</td>
</tr>
<tr>
<td>23</td>
<td>Gabapentin</td>
<td>23,351,000</td>
<td>13.00%</td>
</tr>
<tr>
<td>24</td>
<td>Warfarin</td>
<td>23,287,000</td>
<td>2.00%</td>
</tr>
<tr>
<td>25</td>
<td>Tramadol</td>
<td>23,282,000</td>
<td>9.40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Drug</th>
<th>Total Rxs</th>
<th>Change from Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Clonazepam</td>
<td>23,090,000</td>
<td>5.70%</td>
</tr>
<tr>
<td>27</td>
<td>Lisinopril/HCTZ</td>
<td>22,898,000</td>
<td>12.40%</td>
</tr>
<tr>
<td>28</td>
<td>Lorazepam</td>
<td>22,436,000</td>
<td>1.80%</td>
</tr>
<tr>
<td>29</td>
<td>Cephalexin</td>
<td>21,415,000</td>
<td>-3.00%</td>
</tr>
<tr>
<td>30</td>
<td>Cyclobenzaprine</td>
<td>21,066,000</td>
<td>6.10%</td>
</tr>
<tr>
<td>31</td>
<td>Amoxicillin/pot. clav.</td>
<td>20,504,000</td>
<td>2.10%</td>
</tr>
<tr>
<td>32</td>
<td>Trimethoprim/sulfa</td>
<td>20,462,000</td>
<td>40.20%</td>
</tr>
<tr>
<td>33</td>
<td>Ciprofloxacin HCl</td>
<td>19,673,000</td>
<td>-3.90%</td>
</tr>
<tr>
<td>34</td>
<td>Fluticasone nasal</td>
<td>18,866,000</td>
<td>16.70%</td>
</tr>
<tr>
<td>35</td>
<td>Triamterene w/HCTZ</td>
<td>18,566,000</td>
<td>-8.80%</td>
</tr>
<tr>
<td>36</td>
<td>Pravastatin</td>
<td>17,827,000</td>
<td>30.90%</td>
</tr>
<tr>
<td>37</td>
<td>Trazodone HCl</td>
<td>17,740,000</td>
<td>6.20%</td>
</tr>
<tr>
<td>38</td>
<td>Propoxyphene-N/APAP</td>
<td>17,575,000</td>
<td>-13.90%</td>
</tr>
<tr>
<td>39</td>
<td>Alendronate</td>
<td>17,458,000</td>
<td>31.00%</td>
</tr>
<tr>
<td>40</td>
<td>Fexofenadine</td>
<td>16,689,000</td>
<td>1.20%</td>
</tr>
<tr>
<td>41</td>
<td>Lovastatin</td>
<td>15,498,000</td>
<td>1.30%</td>
</tr>
<tr>
<td>42</td>
<td>Carvedilol</td>
<td>15,392,000</td>
<td>20.90%</td>
</tr>
<tr>
<td>43</td>
<td>Paroxetine</td>
<td>15,048,000</td>
<td>-3.30%</td>
</tr>
<tr>
<td>44</td>
<td>Meloxicam</td>
<td>14,073,000</td>
<td>17.20%</td>
</tr>
<tr>
<td>45</td>
<td>Diazepam</td>
<td>13,957,000</td>
<td>0.60%</td>
</tr>
<tr>
<td>46</td>
<td>Ranitidine HCl</td>
<td>13,817,000</td>
<td>8.70%</td>
</tr>
<tr>
<td>47</td>
<td>Fluconazole</td>
<td>13,381,000</td>
<td>3.00%</td>
</tr>
<tr>
<td>48</td>
<td>Naproxen</td>
<td>13,193,000</td>
<td>0.00%</td>
</tr>
<tr>
<td>49</td>
<td>Doxycycline</td>
<td>13,167,000</td>
<td>5.10%</td>
</tr>
<tr>
<td>50</td>
<td>Amitriptyline</td>
<td>12,904,000</td>
<td>-3.00%</td>
</tr>
</tbody>
</table>
Hydrocodone / Acetaminophen (toxicity)

Similarities:
- Structurally related to codeine
- Equal to morphine in producing opiate-like effects

Brand Names: Vicodin®, Lortab®, Lorcet®

“Cocktail” or “Holy Trinity”
- Hydrocodone
- Soma® / carisoprodol
- Alprazolam / Xanax®

Street prices: $2 to $10+ per tablet depending on strength & region
## State Ranking - Hydrocodone

Total Dosage Units Sold to Retail

January 1, 2010 – December 31, 2011

<table>
<thead>
<tr>
<th>STATE</th>
<th>RANK</th>
<th>TOTAL DOSAGE UNITS 2011</th>
<th>RANK</th>
<th>TOTAL DOSAGE UNITS 2010</th>
<th>% CHANGE 2010 to 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>1</td>
<td>1,070,071,036</td>
<td>1</td>
<td>1,008,085,597</td>
<td>6%</td>
</tr>
<tr>
<td>TX</td>
<td>2</td>
<td>881,240,377</td>
<td>2</td>
<td>825,923,242</td>
<td>6%</td>
</tr>
<tr>
<td>TN</td>
<td>3</td>
<td>439,728,700</td>
<td>3</td>
<td>475,681,320</td>
<td>-8%</td>
</tr>
<tr>
<td>MI</td>
<td>4</td>
<td>436,081,376</td>
<td>5</td>
<td>397,828,308</td>
<td>9%</td>
</tr>
<tr>
<td>FL</td>
<td>5</td>
<td>412,449,314</td>
<td>4</td>
<td>402,021,110</td>
<td>3%</td>
</tr>
<tr>
<td>OH</td>
<td>6</td>
<td>319,235,352</td>
<td>6</td>
<td>303,268,137</td>
<td>5%</td>
</tr>
<tr>
<td>IL</td>
<td>7</td>
<td>316,944,665</td>
<td>7</td>
<td>288,359,428</td>
<td>9%</td>
</tr>
<tr>
<td>IN</td>
<td>8</td>
<td>294,538,688</td>
<td>9</td>
<td>269,256,309</td>
<td>9%</td>
</tr>
<tr>
<td>NY</td>
<td>9</td>
<td>283,936,955</td>
<td>8</td>
<td>287,237,385</td>
<td>-1%</td>
</tr>
<tr>
<td>GA</td>
<td>10</td>
<td>274,651,122</td>
<td>10</td>
<td>255,493,723</td>
<td>7%</td>
</tr>
<tr>
<td>SC</td>
<td>11</td>
<td>262,995,007</td>
<td>11</td>
<td>247,722,550</td>
<td>6%</td>
</tr>
<tr>
<td>AL</td>
<td>12</td>
<td>252,871,816</td>
<td>14</td>
<td>231,802,448</td>
<td>8%</td>
</tr>
<tr>
<td>KY</td>
<td>13</td>
<td>248,071,282</td>
<td>13</td>
<td>234,303,755</td>
<td>6%</td>
</tr>
<tr>
<td>PA</td>
<td>14</td>
<td>246,555,534</td>
<td>15</td>
<td>234,945,069</td>
<td>5%</td>
</tr>
<tr>
<td>NC</td>
<td>15</td>
<td>234,966,344</td>
<td>15</td>
<td>216,889,030</td>
<td>8%</td>
</tr>
<tr>
<td>MO</td>
<td>16</td>
<td>208,785,825</td>
<td>16</td>
<td>180,038,768</td>
<td>14%</td>
</tr>
<tr>
<td>OK</td>
<td>17</td>
<td>192,642,379</td>
<td>17</td>
<td>179,114,866</td>
<td>7%</td>
</tr>
<tr>
<td>LA</td>
<td>18</td>
<td>170,903,746</td>
<td>20</td>
<td>156,098,877</td>
<td>9%</td>
</tr>
<tr>
<td>WA</td>
<td>19</td>
<td>166,055,312</td>
<td>19</td>
<td>163,621,829</td>
<td>1%</td>
</tr>
<tr>
<td>NV</td>
<td>20</td>
<td>161,198,104</td>
<td>18</td>
<td>169,303,028</td>
<td>-5%</td>
</tr>
<tr>
<td>VA</td>
<td>21</td>
<td>157,974,527</td>
<td>21</td>
<td>147,003,823</td>
<td>7%</td>
</tr>
<tr>
<td>AZ</td>
<td>22</td>
<td>153,002,866</td>
<td>22</td>
<td>143,450,419</td>
<td>6%</td>
</tr>
<tr>
<td>MS</td>
<td>23</td>
<td>128,184,306</td>
<td>24</td>
<td>116,311,926</td>
<td>9%</td>
</tr>
<tr>
<td>OR</td>
<td>24</td>
<td>127,284,645</td>
<td>23</td>
<td>122,322,459</td>
<td>4%</td>
</tr>
<tr>
<td>AR</td>
<td>25</td>
<td>121,768,590</td>
<td>25</td>
<td>112,768,066</td>
<td>7%</td>
</tr>
<tr>
<td>WI</td>
<td>26</td>
<td>117,797,893</td>
<td>26</td>
<td>112,507,848</td>
<td>4%</td>
</tr>
<tr>
<td>KS</td>
<td>27</td>
<td>101,921,733</td>
<td>28</td>
<td>94,285,791</td>
<td>7%</td>
</tr>
<tr>
<td>WV</td>
<td>28</td>
<td>97,449,564</td>
<td>27</td>
<td>94,782,536</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE</th>
<th>RANK</th>
<th>TOTAL DOSAGE UNITS 2011</th>
<th>RANK</th>
<th>TOTAL DOSAGE UNITS 2010</th>
<th>% CHANGE 2010 to 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>1</td>
<td>1,070,071,036</td>
<td>1</td>
<td>1,008,085,597</td>
<td>6%</td>
</tr>
<tr>
<td>TX</td>
<td>2</td>
<td>881,240,377</td>
<td>2</td>
<td>825,923,242</td>
<td>6%</td>
</tr>
<tr>
<td>TN</td>
<td>3</td>
<td>439,728,700</td>
<td>3</td>
<td>475,681,320</td>
<td>-8%</td>
</tr>
<tr>
<td>MI</td>
<td>4</td>
<td>436,081,376</td>
<td>5</td>
<td>397,828,308</td>
<td>9%</td>
</tr>
<tr>
<td>FL</td>
<td>5</td>
<td>412,449,314</td>
<td>4</td>
<td>402,021,110</td>
<td>3%</td>
</tr>
<tr>
<td>OH</td>
<td>6</td>
<td>319,235,352</td>
<td>6</td>
<td>303,268,137</td>
<td>5%</td>
</tr>
<tr>
<td>IL</td>
<td>7</td>
<td>316,944,665</td>
<td>7</td>
<td>288,359,428</td>
<td>9%</td>
</tr>
<tr>
<td>IN</td>
<td>8</td>
<td>294,538,688</td>
<td>9</td>
<td>269,256,309</td>
<td>9%</td>
</tr>
<tr>
<td>NY</td>
<td>9</td>
<td>283,936,955</td>
<td>8</td>
<td>287,237,385</td>
<td>-1%</td>
</tr>
<tr>
<td>GA</td>
<td>10</td>
<td>274,651,122</td>
<td>10</td>
<td>255,493,723</td>
<td>7%</td>
</tr>
<tr>
<td>SC</td>
<td>11</td>
<td>262,995,007</td>
<td>11</td>
<td>247,722,550</td>
<td>6%</td>
</tr>
<tr>
<td>AL</td>
<td>12</td>
<td>252,871,816</td>
<td>14</td>
<td>231,802,448</td>
<td>8%</td>
</tr>
<tr>
<td>KY</td>
<td>13</td>
<td>248,071,282</td>
<td>13</td>
<td>234,303,755</td>
<td>6%</td>
</tr>
<tr>
<td>PA</td>
<td>14</td>
<td>246,555,534</td>
<td>15</td>
<td>234,945,069</td>
<td>5%</td>
</tr>
<tr>
<td>NC</td>
<td>15</td>
<td>234,966,344</td>
<td>15</td>
<td>216,889,030</td>
<td>8%</td>
</tr>
<tr>
<td>MO</td>
<td>16</td>
<td>208,785,825</td>
<td>16</td>
<td>180,038,768</td>
<td>14%</td>
</tr>
<tr>
<td>OK</td>
<td>17</td>
<td>192,642,379</td>
<td>17</td>
<td>179,114,866</td>
<td>7%</td>
</tr>
<tr>
<td>LA</td>
<td>18</td>
<td>170,903,746</td>
<td>20</td>
<td>156,098,877</td>
<td>9%</td>
</tr>
<tr>
<td>WA</td>
<td>19</td>
<td>166,055,312</td>
<td>19</td>
<td>163,621,829</td>
<td>1%</td>
</tr>
<tr>
<td>NV</td>
<td>20</td>
<td>161,198,104</td>
<td>18</td>
<td>169,303,028</td>
<td>-5%</td>
</tr>
<tr>
<td>VA</td>
<td>21</td>
<td>157,974,527</td>
<td>21</td>
<td>147,003,823</td>
<td>7%</td>
</tr>
<tr>
<td>AZ</td>
<td>22</td>
<td>153,002,866</td>
<td>22</td>
<td>143,450,419</td>
<td>6%</td>
</tr>
<tr>
<td>MS</td>
<td>23</td>
<td>128,184,306</td>
<td>24</td>
<td>116,311,926</td>
<td>9%</td>
</tr>
<tr>
<td>OR</td>
<td>24</td>
<td>127,284,645</td>
<td>23</td>
<td>122,322,459</td>
<td>4%</td>
</tr>
<tr>
<td>AR</td>
<td>25</td>
<td>121,768,590</td>
<td>25</td>
<td>112,768,066</td>
<td>7%</td>
</tr>
<tr>
<td>WI</td>
<td>26</td>
<td>117,797,893</td>
<td>26</td>
<td>112,507,848</td>
<td>4%</td>
</tr>
<tr>
<td>KS</td>
<td>27</td>
<td>101,921,733</td>
<td>28</td>
<td>94,285,791</td>
<td>7%</td>
</tr>
<tr>
<td>WV</td>
<td>28</td>
<td>97,449,564</td>
<td>27</td>
<td>94,782,536</td>
<td>3%</td>
</tr>
</tbody>
</table>

TOTAL DU's 8,767,548,031 8,316,766,366 5%
<table>
<thead>
<tr>
<th>Year</th>
<th>Hydrocodone</th>
<th>Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>15,191</td>
<td>9,480</td>
</tr>
<tr>
<td>2002</td>
<td>17,429</td>
<td>10,515</td>
</tr>
<tr>
<td>2003</td>
<td>19,578</td>
<td>11,254</td>
</tr>
<tr>
<td>2004</td>
<td>22,654</td>
<td>12,603</td>
</tr>
<tr>
<td>2005</td>
<td>22,229</td>
<td>13,191</td>
</tr>
<tr>
<td>2006</td>
<td>22319</td>
<td>13,473</td>
</tr>
<tr>
<td>2007</td>
<td>24,558</td>
<td>15,069</td>
</tr>
<tr>
<td>2008</td>
<td>26,306</td>
<td>17,256</td>
</tr>
<tr>
<td>2009</td>
<td>27,753</td>
<td>18,396</td>
</tr>
<tr>
<td>2010</td>
<td>28,310</td>
<td>19,363</td>
</tr>
</tbody>
</table>
### NFLIS – State, local and federal cases reported

<table>
<thead>
<tr>
<th>Year</th>
<th>Hydrocodone</th>
<th>Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>9,106</td>
<td>7,993</td>
</tr>
<tr>
<td>2003</td>
<td>11,617</td>
<td>9,431</td>
</tr>
<tr>
<td>2004</td>
<td>16,299</td>
<td>13,342</td>
</tr>
<tr>
<td>2005</td>
<td>21,019</td>
<td>14,417</td>
</tr>
<tr>
<td>2006</td>
<td>24,798</td>
<td>17,733</td>
</tr>
<tr>
<td>2007</td>
<td>30,410</td>
<td>22,160</td>
</tr>
<tr>
<td>2008</td>
<td>33,611</td>
<td>28,340</td>
</tr>
<tr>
<td>2009</td>
<td>37,888</td>
<td>37,673</td>
</tr>
<tr>
<td>2010</td>
<td>39,138</td>
<td>47,193</td>
</tr>
<tr>
<td>2011</td>
<td>33,423</td>
<td>42,279</td>
</tr>
</tbody>
</table>
## National Forensic Laboratory Information System (NFLIS) – State, local and federal exhibits

<table>
<thead>
<tr>
<th>Year</th>
<th>Hydrocodone</th>
<th>Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>10,511</td>
<td>9,464</td>
</tr>
<tr>
<td>2003</td>
<td>13,699</td>
<td>11,311</td>
</tr>
<tr>
<td>2004</td>
<td>18,303</td>
<td>15,519</td>
</tr>
<tr>
<td>2005</td>
<td>23,537</td>
<td>17,057</td>
</tr>
<tr>
<td>2006</td>
<td>27,929</td>
<td>21,155</td>
</tr>
<tr>
<td>2007</td>
<td>34,449</td>
<td>26,479</td>
</tr>
<tr>
<td>2008</td>
<td>38,424</td>
<td>34,655</td>
</tr>
<tr>
<td>2009</td>
<td>44,077</td>
<td>46,590</td>
</tr>
<tr>
<td>2010</td>
<td>45,562</td>
<td>60,186</td>
</tr>
<tr>
<td>2011</td>
<td>39,226</td>
<td>53,788</td>
</tr>
</tbody>
</table>
## Drug Abuse Warning Network (DAWN) - Emergency Department Mentions

<table>
<thead>
<tr>
<th>Year</th>
<th>Hydrocodone</th>
<th>Oxycodone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>9,320</td>
<td>4,069</td>
</tr>
<tr>
<td>1995</td>
<td>9,686</td>
<td>3,393</td>
</tr>
<tr>
<td>1996</td>
<td>11,419</td>
<td>3,190</td>
</tr>
<tr>
<td>1997</td>
<td>11,570</td>
<td>5,012</td>
</tr>
<tr>
<td>1998</td>
<td>13,611</td>
<td>5,211</td>
</tr>
<tr>
<td>1999</td>
<td>15,252</td>
<td>6,429</td>
</tr>
<tr>
<td>2000</td>
<td>20,098</td>
<td>10,825</td>
</tr>
<tr>
<td>2001</td>
<td>21,567</td>
<td>18,409</td>
</tr>
<tr>
<td>2002</td>
<td>25,197</td>
<td>22,397</td>
</tr>
<tr>
<td>2004*</td>
<td>39,844</td>
<td>41,701</td>
</tr>
<tr>
<td>2005</td>
<td>47,192</td>
<td>52,943</td>
</tr>
<tr>
<td>2006</td>
<td>57,550</td>
<td>64,888</td>
</tr>
<tr>
<td>2007</td>
<td>65,735</td>
<td>76,587</td>
</tr>
<tr>
<td>2008</td>
<td>89,051</td>
<td>105,214</td>
</tr>
<tr>
<td>2009</td>
<td>86,258</td>
<td>148,449</td>
</tr>
</tbody>
</table>

*Changes in DAWN methodology were implemented in 2004 and thus the data from 2004 through 2009 cannot be compared to those of the previous years.
## Monitoring the Future, Annual Prevalence (Past Year Use) in Percent

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxycontin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>1.3</td>
<td>1.7</td>
<td>1.7</td>
<td>1.8</td>
<td>2.6</td>
<td>1.8</td>
<td>2.1</td>
<td>2.0</td>
<td>2.1</td>
<td>1.8</td>
</tr>
<tr>
<td>10th Grade</td>
<td>3.0</td>
<td>3.6</td>
<td>3.5</td>
<td>3.2</td>
<td>3.8</td>
<td>3.9</td>
<td>3.6</td>
<td>5.1</td>
<td>4.6</td>
<td>3.9</td>
</tr>
<tr>
<td>12th Grade</td>
<td>4.0</td>
<td>4.5</td>
<td>5.0</td>
<td>5.5</td>
<td>4.3</td>
<td>5.2</td>
<td>4.7</td>
<td>4.9</td>
<td>5.1</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Vicodin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>2.5</td>
<td>2.8</td>
<td>2.5</td>
<td>2.6</td>
<td>3.0</td>
<td>2.7</td>
<td>2.9</td>
<td>2.5</td>
<td>2.7</td>
<td>2.1</td>
</tr>
<tr>
<td>10th Grade</td>
<td>6.9</td>
<td>7.2</td>
<td>6.2</td>
<td>5.9</td>
<td>7.0</td>
<td>7.2</td>
<td>6.7</td>
<td>8.1</td>
<td>7.7</td>
<td>5.9</td>
</tr>
<tr>
<td>12th Grade</td>
<td>9.6</td>
<td>10.5</td>
<td>9.3</td>
<td>9.5</td>
<td>9.7</td>
<td>9.6</td>
<td>9.7</td>
<td>9.7</td>
<td>8.0</td>
<td>8.1</td>
</tr>
</tbody>
</table>

*From 2010 to 2011, there was a statistically significant decrease (1.8%) for 10th graders in past year use of Vicodin.*
National Survey on Drug Use and Health – Lifetime nonmedical users of hydrocodone and oxycodone

<table>
<thead>
<tr>
<th>Year</th>
<th>Hydrocodone Products</th>
<th>Oxycodone Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>13,952,000</td>
<td>10,151,000</td>
</tr>
<tr>
<td>2003</td>
<td>16,808,000</td>
<td>11,538,000</td>
</tr>
<tr>
<td>2004</td>
<td>17,734,000</td>
<td>11,925,000</td>
</tr>
<tr>
<td>2005</td>
<td>18,875,000</td>
<td>12,029,000</td>
</tr>
<tr>
<td>2006</td>
<td>20,755,000</td>
<td>12,858,000</td>
</tr>
<tr>
<td>2007</td>
<td>21,335,000</td>
<td>13,055,000</td>
</tr>
<tr>
<td>2008</td>
<td>22,838,000</td>
<td>13,759,000</td>
</tr>
<tr>
<td>2009</td>
<td>23,543,000</td>
<td>15,281,000</td>
</tr>
<tr>
<td>2010</td>
<td>24,093,000</td>
<td>15,553,000</td>
</tr>
</tbody>
</table>
## State Ranking - Oxycodone
### Total Dosage Units Sold to Retail
#### January 1, 2010 – December 31, 2011

**Drug Enforcement Administration, Office of Diversion Control, Office of the Deputy Assistant Administrator**

**Source:** ARCOS  
**Date Prepared:** 03/06/2012

<table>
<thead>
<tr>
<th>STATE</th>
<th>RANK</th>
<th>TOTAL DOSAGE UNITS 2011</th>
<th>RANK</th>
<th>TOTAL DOSAGE UNITS 2010</th>
<th>% CHANGE 2010 to 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL</td>
<td>1</td>
<td>525,338,986</td>
<td>1</td>
<td>650,885,860</td>
<td>-24%</td>
</tr>
<tr>
<td>PA</td>
<td>2</td>
<td>311,529,433</td>
<td>2</td>
<td>288,870,043</td>
<td>7%</td>
</tr>
<tr>
<td>NY</td>
<td>3</td>
<td>299,937,485</td>
<td>4</td>
<td>266,896,986</td>
<td>11%</td>
</tr>
<tr>
<td>CA</td>
<td>4</td>
<td>295,022,496</td>
<td>5</td>
<td>261,181,184</td>
<td>11%</td>
</tr>
<tr>
<td>OH</td>
<td>5</td>
<td>289,383,062</td>
<td>6</td>
<td>282,936,529</td>
<td>2%</td>
</tr>
<tr>
<td>NC</td>
<td>6</td>
<td>222,189,039</td>
<td>7</td>
<td>201,693,238</td>
<td>9%</td>
</tr>
<tr>
<td>NJ</td>
<td>7</td>
<td>195,014,871</td>
<td>8</td>
<td>179,311,163</td>
<td>8%</td>
</tr>
<tr>
<td>AZ</td>
<td>8</td>
<td>173,034,663</td>
<td>9</td>
<td>154,633,084</td>
<td>11%</td>
</tr>
<tr>
<td>TN</td>
<td>9</td>
<td>158,340,886</td>
<td>10</td>
<td>141,889,292</td>
<td>10%</td>
</tr>
<tr>
<td>WA</td>
<td>10</td>
<td>153,748,970</td>
<td>11</td>
<td>151,249,822</td>
<td>2%</td>
</tr>
<tr>
<td>MA</td>
<td>11</td>
<td>151,947,593</td>
<td>12</td>
<td>146,314,057</td>
<td>4%</td>
</tr>
<tr>
<td>MD</td>
<td>12</td>
<td>149,086,425</td>
<td>13</td>
<td>141,639,892</td>
<td>5%</td>
</tr>
<tr>
<td>GA</td>
<td>13</td>
<td>142,133,490</td>
<td>14</td>
<td>125,986,084</td>
<td>11%</td>
</tr>
<tr>
<td>VA</td>
<td>14</td>
<td>131,740,301</td>
<td>15</td>
<td>118,068,618</td>
<td>10%</td>
</tr>
<tr>
<td>CO</td>
<td>15</td>
<td>112,194,642</td>
<td>16</td>
<td>100,227,545</td>
<td>11%</td>
</tr>
<tr>
<td>MO</td>
<td>16</td>
<td>109,876,292</td>
<td>17</td>
<td>99,979,350</td>
<td>9%</td>
</tr>
<tr>
<td>WI</td>
<td>17</td>
<td>108,480,463</td>
<td>18</td>
<td>100,329,263</td>
<td>8%</td>
</tr>
<tr>
<td>OR</td>
<td>18</td>
<td>106,807,404</td>
<td>19</td>
<td>101,389,306</td>
<td>5%</td>
</tr>
<tr>
<td>KY</td>
<td>19</td>
<td>94,901,418</td>
<td>20</td>
<td>81,873,088</td>
<td>14%</td>
</tr>
<tr>
<td>IN</td>
<td>20</td>
<td>90,455,351</td>
<td>21</td>
<td>80,726,827</td>
<td>11%</td>
</tr>
<tr>
<td>MI</td>
<td>21</td>
<td>82,434,611</td>
<td>22</td>
<td>73,164,053</td>
<td>11%</td>
</tr>
<tr>
<td>SC</td>
<td>22</td>
<td>79,359,293</td>
<td>23</td>
<td>71,450,580</td>
<td>10%</td>
</tr>
<tr>
<td>MN</td>
<td>23</td>
<td>76,127,137</td>
<td>24</td>
<td>69,549,000</td>
<td>9%</td>
</tr>
<tr>
<td>CT</td>
<td>24</td>
<td>74,439,138</td>
<td>25</td>
<td>71,531,918</td>
<td>4%</td>
</tr>
<tr>
<td>NV</td>
<td>25</td>
<td>70,560,182</td>
<td>26</td>
<td>63,270,105</td>
<td>10%</td>
</tr>
<tr>
<td>TX</td>
<td>26</td>
<td>69,676,107</td>
<td>27</td>
<td>62,437,942</td>
<td>10%</td>
</tr>
<tr>
<td>AL</td>
<td>27</td>
<td>61,157,797</td>
<td>28</td>
<td>51,216,443</td>
<td>16%</td>
</tr>
<tr>
<td>OK</td>
<td>28</td>
<td>57,706,857</td>
<td>29</td>
<td>52,363,292</td>
<td>9%</td>
</tr>
</tbody>
</table>

**TOTAL DU's:** 5,055,904,995  
**2010:** 4,804,706,841  
**% CHANGE:** 5%
OxyContin® (Schedule II)

• Controlled release formulation of Schedule II oxycodone
  – The controlled release method of delivery allows for a longer duration of drug action so it contains much larger doses of oxycodone
  – Abusers easily compromise the controlled release formulation by crushing the tablets for a powerful morphine-like high
  – Street Slang: “Hillbilly Heroin”
  – 10, 15, 20, 30, 40, 60, 80mg available

• Effects:
  – Similar to morphine in effects and potential for abuse/dependence

• Street price: Approx. $80 per 80mg tablet

• Since 2002, use among 12th graders has remained between approximately 4% and 5%*

*SOURCE: 2007 Monitoring the Future study released April 2008
Other Oxycodone Products

Percocet

Percodan

Tylox

Roxicodone
Opiates v. Heroin
Circle of Addiction & the Next Generation

Oxycodone Combinations
- Percocet®
  - $7-$10/tab

Hydrocodone
- Lorcet®
  - $5-$7/tab

Heroin
- $15/bag

OxyContin®
- $80/tab

Roxicodone®
- Oxycodone IR
  - 15mg, 30mg
  - $30-$40/tab
Substance Abuse Treatment Admissions within Specific Age Groups That Reported Any Pain Reliever Abuse: 1998-2008

Up more than fourfold

Source: SAMSHA Treatment Episode Data Set, 1998-2008 released July 15, 2010
Methadone

Methadone - 5mg & 10mg
Mallinckrodt Pharmaceuticals 5 mg & 10mg

Methadone 40 mg
Overdose deaths
Prescription drugs take deadly toll in WV

An alarming new study has found that prescription drugs killed more people in West Virginia in 2019 than illegal drugs. According to the report, one out of the 10 accidental overdose deaths reported in the Mountain State involved prescription drugs. Researchers in a joint state-federal study came to the troubling conclusion after studying 432 accidental overdose autopsies, excluding suicides and overdoses, the Associated Press reported.

The report found that one-third of the prescription drugs taken during the fatal incidents were being used as a result of a prescription issued by a doctor within the last 30 days. The report found fewer than one in five of the deaths involved illegal narcotics.

Aran Hall, a Centers for Disease Control and Prevention Intelligence Service Officer for the West Virginia Department of Health and Human Resources, said there is a perception among some citizens that just because narcotics are legal and prescribed drugs, they are somehow safer.

The report found that methadone contributed to one of three deaths, or more than any other prescription drug. However, the report found that only 10 of the overdose victims were enrolled in a methadone clinic for drug abuse treatment.

The report found that other opioid drugs frequently linked to accidental overdose deaths included hydrocodone and oxycodone. The two narcotics contributed to one in five deaths. Morphine contributed to about one in seven deaths, the report found. Anti-anxiety drugs were found in 43 percent of the deaths.

While law enforcement officials have been fighting the illegal drug scourge in our region for years, accidental overdose deaths associated with the misuse of prescription narcotics now represents an emerging epidemic for the Mountain State.

The alarming new study from the West Virginia Department of Health and Human Resources should be viewed as a call to action for our community. We must take steps now to educate citizens of the growing number of accidental overdose deaths in the state associated with the misuse of legally prescribed drugs.

We must act now to educate our community. If we fail to act, the number of accidental overdose deaths in the state and the region could continue to rise. It will take a combined effort of public education and law enforcement cooperation to reduce these alarming statistics.
Rising methadone deaths

Our view: Baltimore public health officials are trying to find out if treatment for chronic pain sufferers accounts for increase in methadone overdoses

The June letter from the Baltimore Health Department alerted physicians, nurses and other providers to a significant increase in methadone-related overdose deaths. The letter from Dr. Laura Herrera, a deputy city health commissioner, raised the possibility that the overdoses involved prescriptions for pain. It was a cautionary reminder that health care providers should educate their patients about the proper use of methadone and the lethal risks of taking extra doses.

Dr. Herrera was right to be concerned: Methadone overdose deaths of city residents have risen from seven in 1995 to 74 in 2007. In 2007, the last year for which statistics are available, there was a 23 percent increase in such deaths over the previous year. The city deaths coincide with a similarly disturbing fivefold increase in methadone-related deaths nationally between 1999 and 2005. But proving that the use of methadone as a pain reliever caused these deaths isn’t easy — no one tracks how many physicians prescribe methadone to relieve chronic pain from cancer or arthritis, for example.

Prescribing methadone has been an accepted form of treatment for chronic pain for some time, according to pain specialists at Johns Hopkins Hospital and the University of Maryland Medical Center. They say that they have seen no methadone-related deaths among their patients. Methadone used for pain treatment is prescribed in pill form; its risk stems from the drug’s potency and its lingering presence in the body once its pain-relieving function has ceased. An extra dose could slow down a patient’s breathing, resulting in coma or death.

To identify the extent of the problem and the patients most at risk, the city Health Department has reviewed data from the medical examiner’s office. It also has asked the quasi-public city agency that oversees drug treatment in Baltimore to cross-check methadone overdose victims against its patient rosters. That’s a critical aspect of the review because it could uncover misuse, abuse or diversion of methadone from drug treatment centers. Or it could lend credence to the prevailing view that more training is required for private physicians who prescribe methadone for pain.

At least 29 states have prescription monitoring programs that would identify indiscriminate prescribing, doctor-shopping and other abuses. A task force established this year in Maryland is studying the possibility of establishing a similar tracking system for methadone and other controlled substances.

Until then, Dr. Herrera and her colleagues at the Health Department have moved expeditiously and forthrightly to unravel this mystery. The results of their findings are the key to understanding and reversing this disturbing trend.
Report finds trends in child deaths

By ALISHA WYMAN
The Union Democrat

Prescription drug abuse, suicide and vehicle accidents were the most prevalent causes of death last year among children and young adults in Tuolumne County, according to a recently-released report.

The Child Death Review Team, made up of officials from the Sheriff’s Office, the Sonora Police Department, the Public Health Department, Child Welfare Services and other agencies, examined 11 deaths of youth through age 25. Most were teens and young adults.

One of the concerning trends was a rise in abuse of prescription drugs, particularly methadone, Sheriff’s spokesman Lt. Dan Breasler said. “What we’re finding is even small amounts of methadone mixed with alcohol can cause death,” he said. “It doesn’t take much.”

Three young people died of accidental overdose in 2007, two of which involved a mixture of alcohol and methadone, a painkiller also used to help with withdrawals of harsher drugs such as heroin.

Tuolumne County isn’t the only area to see a rise in prescription drug abuse, said Dr. Todd Stolp, county public health officer. “It’s a national issue, but we’re in the process of identifying the extent of the problem and how to address the problem,” he said.

There were three suicides in 2007. The number could be higher, however, because there were some drug-related cases in which there wasn’t enough evidence to classify as a suicide.
WHY IS IT ALSO USED AS AN ANALGESIC??????

Cheapest narcotic pain reliever – synthetic

Insurance companies

What’s the problem?
Overdose...Why?

- Patients not taking the drug as directed
- Physicians not properly prescribing the drug
- Non medical users ingesting with other substances
- Opiate naive
Methadone – Drug Interactions

- CNS depressants (e.g., alcohol, anesthetics, sedatives, other opioids) - Additive effect
- Antiretroviral drugs have variable interactions
- CYP3A4 inhibitors (some antifungal agents, macrolide antibiotics, and SSRIs) – Inhibits elimination
- Grapefruit juice inhibits methadone elimination
- Smoking enhances (CYP1A2) methadone elimination
- Self-inducer – Enhances (3.5 fold between 1st dose and steady state) its own elimination
- Anticonvulsants – Enhances methadone elimination
ER visits involving Methadone

Source: Drug Abuse Warning Network (DAWN) 2009: August 2011
Suicide attempts involving Methadone

Source: Drug Abuse Warning Network (DAWN) 2009: August 2011
Deaths involving Methadone

Source: NCHS Data Brief #81, December 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3,845</td>
</tr>
<tr>
<td>2005</td>
<td>4,460</td>
</tr>
<tr>
<td>2006</td>
<td>5,406</td>
</tr>
<tr>
<td>2007</td>
<td>5,518</td>
</tr>
<tr>
<td>2008</td>
<td>4,924</td>
</tr>
</tbody>
</table>
Opioid analgesic involved in deaths

Source: NCHS Data Brief #81, December 2011
Deaths/100,000 Prescriptions in Florida

Source: FDLE and NPA Plus™
Methadone Single Dose Kinetics


Source: Resource Manual for CME course entitled “Prescribing Opioids for Chronic Pain” – Offered by the New England Chapters of the American Society of Addiction Medicine with support from CSAT, SAMHSA
Fixed Methadone Dose Interval

Dosage intervals


Source: Resource Manual for CME course entitled “Prescribing Opioids for Chronic Pain” – Offered by the New England Chapters of the American Society of Addiction Medicine with support from CSAT, SAMHSA
One Pill can Kill

By Jonathan J. Lipman, PhD

THE METHADONE POISONING "Epidemic"

Increasing use of Methadone as a pain killer may be fueling a disturbing increase in deaths related to this potent drug.

Death and morbidity associated with methadone treatment has increased dramatically in recent years, largely in the population prescribed the drug for pain control rather than addiction maintenance. Inadvertent overdoes is becoming increasingly common, likely in part because the drug's acute pain-relieving effect lasts only 4 to 6 hours, yet it has a very long and variable plasma half-life of 24 to 36 (in some studies 15 to 55) hours, is stored in body tissues, and toxic accumulation occurs with two-frequent consumption. Adverse effects are most common in patients treated with methadone in combination with other drugs. Both cardiac and respiratory systems are vulnerable targets for the drug's toxic actions, and other co-administered drugs can interactively increase the risk of death through a variety of mechanisms including direct central nervous system depression of respiration, idiosyncratic respiratory vulnerabilities, and lethal cardiac arrhythmias. Idiosyncratic factors also play a part in methadone's cardiac toxicity, and risk factors are well characterized, though perhaps not sufficiently widely known and understood by key stakeholders. The recent change in FDA labeling requirements for the drug—and the November 2006 posting of a government warning regarding its use in pain treatment—has not yet reduced morbidity and mortality associated with methadone as reported in the MedWatch database for the first quarter of 2007.
Other Narcotics

Fentanyl

Hydromorphone

Meperidine

Morphine

Codeine

Propoxyphene
Fentanyl

- Fentanyl Patches
- Fentanyl Citrate dispensed in a berry flavored lollipop-type unit
- Fentanyl is 100 times more potent than morphine
- Intended to be used for chronic cancer pain & only for people who are tolerant to prescription opioid (narcotic) pain medicines
- Abused for its intense euphoric effects

Fentora®

Actiq®
Tapentadol Prescriptions

Source: IMS Health National Prescription Audit Plus downloaded 6/5/2012
Narcotic Addiction Treatment Options

• Office based (DATA-2000)
• Methadone treatment programs
Methadone Clinics

- 1247 clinics operating nationwide
Other FDA Approved Drugs for Narcotic Addiction Treatment

• Schedule III
  – Buprenorphine – Drug Code 9064
  • Subutex (sublingual, single entity tablet)
  • Suboxone (sublingual, buprenorphine/naloxone tablet)
DATA Waive Physicians

• Current (6/5/12) CSAT population of certified DATA Waive Physicians:
  - DW-30 Physicians- 17,397
  - DW-100 Physicians- 5,984

• Total: 23,381
DATA Waive Physicians

• Current (6/5/2012) DEA population of certified DATA Waive Physicians:
  • DW-30 Physicians - 15,867
  • DW-100 Physicians - 5,430
  • Military Physicians – 45

• Total 21,342

• Difference between CSAT & DEA Population:
  • 2,039
Buprenorphine Prescriptions

Source: IMS Health National Prescription Audit Plus downloaded 6/5/2012
NFLIS Data

• From January 2001 to June 2011 buprenorphine reports increased more than 900-fold (from 6 to 5,427).

• The largest increase of Buprenorphine reports during the same time period was in the Northeast from no reports to 4.8 reports per 100,000 persons.
NFLIS Data

Reporting period:

January 2011 through June 2011

Buprenorphine*  4,836 reports  7.31%

*3rd most reported Narcotic analgesic behind Oxycodone and Hydrocodone.
Drug abusers often prefer alprazolam due to its rapid onset and longer duration of action.

Alprazolam was ranked third in the number of prescriptions for controlled substances in 2003, 2004, 2005 and 2006.*

For all sales of generic pharmaceuticals, alprazolam was ranked 7th.**

* Source IMS Health
** Source Verispan VONA
Other Controlled Substances

- Phentermine C-IV
- Phendimetrazine C-III
  - Bontril®
- Amphetamines
  - Adderall C-II
  - Methylphenidate C-II
    - Ritalin®
    - Concerta®
REQUIRED READING

DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS
FOURTH EDITION
TEXT REVISION

DSM-IV-TR®

AMERICAN PSYCHIATRIC ASSOCIATION
Some hyperactive-impulsive or inattentive symptoms that cause impairment must have been present before age 7 years, although many individuals are diagnosed after the symptoms have been present for a number of years, especially in the case of individuals with the Predominantly Inattentive Type (Criterion B).

**Diagnostic Features**

1. Fails to give close attention to details...make careless mistakes in schoolwork, work
2. Difficulty sustaining attention in tasks
3. Does not seem to listen when spoken to
4. Does not follow through on instructions
5. Difficulty organizing tasks
6. Often loses things necessary for tasks
7. Easily distracted
8. Forgetful

(h) is often easily distracted by extraneous stimuli
(l) is often forgetful in daily activities

(2) six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

**Hyperactivity**
(a) often fidgets with hands or feet or squirms in seat
(b) often leaves seat in classroom or in other situations in which remaining

**Fidgets**
**Can’t remain seated**
**Restlessness**
**Difficulty awaiting turn**
**Often interrupts or intrudes**
There are no laboratory tests, neurological assessments, or attentional assessments that have been established as diagnostic in the clinical assessment of Attention-Deficit/Hyperactivity Disorder.
Ritalin® / Concerta® / Adderall

- Used legitimately to treat ADHD
- Used non-medically to get high and as an academic “performance-enhancer” to improve memory and improve concentration – gain the edge
  - Higher GPA
  - Higher SAT / ACT score
  - Get that scholarship
QUOTAS/SHORTAGES
Quotas

- DEA’s mission is to prevent, detect, and investigate the diversion of pharmaceutical controlled substance from legitimate channels while ensuring an adequate and uninterrupted supply of pharmaceutical controlled substances to meet legitimate medical, commercial, and scientific needs.

- DEA is statutorily required to issue production material quota to the registered manufacturers on a yearly basis (21 USC 826).
Criteria in Determining Quota

- The manufacturer's current rate of disposal
- The trend of the national disposal rate during the preceding calendar year
- The manufacturer's production cycle and inventory position
- The economic availability of raw materials
- Yield and stability problems
- Emergencies such as strikes and fires
- Other factors.
Quotas/Shortages

• DEA issued enough quota to the industry to meet the medical, commercial, and scientific needs.

• DEA has no statutory or regulatory authority relating to FDA manufacturing issues.
ROBITUSSIN

Because Gatorade doesn't make you a flying robot in space.
Dextromethorphan (DXM)

- Cough suppressant in over 125 OTC medications (e.g. Robitussin and Coricidin)
- Bulk form on the Internet
- At high doses, has Ketamine- and PCP-like effects
- Produces physical and psychological dependence
- Deaths associated with DXM abuse
Cough Syrup Cocktails

- “Syrup and Soda”
- “Seven and Syrup”
- “Purple Drank”
Methods of Diversion

• Practitioners / Pharmacists
  – Illegal distribution
  – Self abuse
  – Trading drugs for sex

• Employee pilferage
  – Hospitals
  – Practitioners’ offices
  – Nursing homes
  – Retail pharmacies
  – Manufacturing / distribution facilities

• Pharmacy / Other Theft
  – Armed robbery
  – Burglary (Night Break-ins)
  – In Transit Loss (Hijacking)
  – Smurfing

• Patients / Drug Seekers
  – Drug rings
  – Doctor-shopping
  – Forged / fraudulent / altered prescriptions

• The medicine cabinet / obituaries

• The Internet

• Pain Clinics
Where are the Pharmaceuticals Coming From?

- Medicine Cabinet
- Internet
- Pain Clinics
- Doctor Shoppers; RX Fraud; Practitioner Diversion
Prescription Fraud

• **Fake prescriptions**
  – Highly organized
  – Use real physician name and DEA Registrant Number
    • Contact Information false or “fake office”
      – (change locations often to avoid detection)
  – Prescription printing services utilized
    • Not required to ask questions or verify information printed

• **Stolen prescriptions**
  – Forged
  – “Smurfed” to a large number of different pharmacies
Doctor Shopping
Prescription Drug Monitoring Programs
Diversion via the Internet
1. Consumer in Montana orders hydrocodone on the Internet.

2. Request goes through Website Server in San Antonio, TX.

3. Web Company (located in Miami, FL) adds request to queue for Physician approval.

4. Order is approved by Physician in New Jersey and returned to Web Company.

5. Approved order then sent by Web Company to an affiliated Pharmacy.

6. Pharmacy in Iowa fills order and ships to Consumer via Shipper.
New Felony Offense
Internet Trafficking

- 21 USC 841(h)(1): It shall be unlawful for any person to knowingly or intentionally:
  (A) deliver, distribute, or dispense a controlled substance by means of the Internet, except as authorized by this title; or
  (B) aid or abet any violation in (A)

What has been the reaction?????
Per Se Violations

Automatic Violation of the CSA if any of the following occurs:

- No in-person medical evaluation by prescribing practitioner
- Online pharmacy not properly registered with *modified* registration.
- Website fails to display required information
Current CSA Registrant Population

Total Population: 1,341,505

- Practitioner: 1,040,496
- Mid-Level Practitioner: 170,115
- Pharmacy: 65,946
- Hospital/Clinic: 15,702
- Manufacturer: 525
- Distributor: 805
- Researcher: 6,357
- Analytical Labs: 1,504
- NTP: 1,247
- ADS Machine: 161

as of 1/21/2010
SOOOO…How many have applied for registration for Internet Pharmacy Operations??????

7
What took the place of Internet Medical Care and Internet CS pharmaceutical Distribution?
Pain Clinics
Medical Care?

- Many of these clinics are prescription/dispensing mills.
- Minimal practitioner/patient interaction
Checks and Balances
Under the CSA

• Practitioners

“A prescription for a controlled substance to be effective must be issued for a legitimate medical purpose by an individual practitioner acting in the usual course of professional practice.” (21 CFR § 1306.04(a))

United States v Moore  423 US 122 (1975)
Increased Law Enforcement Pressure

- Clinics migrating north and west
- Funded by owners in Florida
Explosion of South Florida Pain Clinics

As of June 4, 2010, Florida has received 1,118 applications and has approved 1,026

*As of May 14, 2010, Broward 142; Miami-Dade 79; Palm Beach 111
MIGRATION OF PAIN CLINICS
MIGRATION OF PAIN CLINICS
MIGRATION OF PAIN CLINICS
‘The Florida Migration’

• Vast majority of ‘patients’ visiting Florida “pain clinics” come from out-of-state:
  – Georgia
  – Kentucky
  – Tennessee
  – Ohio
  – Massachusetts
  – New Jersey
  – North and South Carolina
  – Virginia
  – West Virginia
THE MIGRATION

New York Presbyterian Hospital
THE MIGRATION

University of Pennsylvania Hospital
THE MIGRATION
Georgetown University
Medical Center
INOVA
THE MIGRATION

Wake Forrest Baptist Medical Center
THE MIGRATION
Medical University of South Carolina
THE MIGRATION

Emory University Hospital
Drugs Prescribed

- A ‘cocktail’ of oxycodone and alprazolam (Xanax®)
- An average ‘patient’ receives prescriptions or medications in combination

<table>
<thead>
<tr>
<th>Schedule II</th>
<th>Schedule III</th>
<th>Schedule IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxycodone 15mg, 30mg</td>
<td>Vicodin (Hydrocodone)</td>
<td>Xanax (Alprazolam)</td>
</tr>
<tr>
<td>Roxicodone 15mg, 30mg</td>
<td>Lorcet</td>
<td>Valium (Diazepam)</td>
</tr>
<tr>
<td>Percocet</td>
<td>Lortab</td>
<td></td>
</tr>
<tr>
<td>Percodan</td>
<td>Tylenol #3 (codeine)</td>
<td></td>
</tr>
<tr>
<td>Demerol</td>
<td>Tylenol #4 (codeine)</td>
<td></td>
</tr>
<tr>
<td>Methadone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Average Charges for a Clinic Visit

• Price varies if medication is dispensed or if customers receive prescriptions

• Some clinics advertise in alternative newspapers citing discounts for new patients such as 'buy one get one free' or “50% off with this ad”

• Typically, initial office visit is $250; each subsequent visit is $150 to $200

• Average 120-180 30mg oxycodone tablets per visit
Cost of Drugs

• The ‘cocktail’ prescriptions go for $650 to $1,000

• According to medical experts, most clinics do not require sufficient medical history and tests for proper prescribing of Schedule II substances

• Each oxycodone 30mg tablet costs $1.75 to $2.50 at the clinics
  
  – On the street in Florida, that pill can be re-sold for $7 to $15
  
  – Outside of Florida, it can be re-sold for $25 to $30 ($1 per mg)
Why is this happening?
What’s the Profit?

• May 20, 2010, Tampa, Florida
owner/operator of pain clinic dispensing oxycodone

• $5,822,604.00 cash seized
What’s the Profit?

• One case in Florida owner/operator of pain clinic allegedly generated $40 million in drug proceeds
• Houston investigation $41.5 million in assets
What’s the Profit?

• Another case in Florida - pain clinic operation paid his doctors (in 2009):
  – $861,550
  – $989,975
  – $1,031,975
  – $1,049,032
  – $1,225,775
DEA Distributor Initiative

August 2005 – Present:

- Briefings to 79 firms with 224 locations

- Examples of civil action against distributors:
  - AmerisourceBergen,
  - Cardinal Health, $34 million civil fine
  - McKesson, $13.25 million civil fine
  - Harvard, $6 million civil fine

- Examples of suspension, surrender or revocation of DEA registration
  - Keysource, loss of DEA registration
  - Sunrise, loss of DEA registration
The Flow of Pharmaceuticals

- Raw Material
  - Importers
    - Manufacturers
      - Dosage Form Manufacturers
        - Wholesalers - Distributors
          - Smaller Distributors
            - Hospitals
            - Pharmacies
              - Physicians (Rx and drugs)
                - NTPs
                  - PATIENTS

- (Thebaine)
- QUOTAS
  - 21 USC 823(c)(1)
    - 21 USC 823(d)(1)
      - 21 CFR 1301.71
  - 21 USC 823(b)(1)
    - 21 USC 823(e)(1)
      - 21 CFR 1301.71
        - 21 CFR 1301.74
          - (Suspicious Orders)
June 2010 DEA takes action against four wholesale distributors supplying doctors who were dispensing from rogue pain clinics.
State of Florida Legislative Actions

• Effective October 1, 2010
  – Pain clinics are banned from advertising that they sell narcotics
  – They can only dispense 72-hour supply of narcotics
  – Prohibits the registration of pain clinics unless they are owned by physicians or licensed by non-physicians as a health care clinic

• Effective July 1, 2011
  – Clinics must turn over their supply of C-II and C-III controlled substances
  – Clinics are no longer able to dispense these drugs
  – Clinics cannot have ANY affiliation with a doctor that has lost a DEA number
Reaction

– Shift from dispensing physicians to prescribing physicians

– New pharmacy applications in Florida increased dramatically in 2010
Clinic response to the Florida legislation prohibiting the sale of CS from pain clinics?

Buy Pharmacies!
Dealers creative in oxycodone bid

They try to open pharmacies after Florida targets ‘pill mills’

By Donna Leinwand Leger
USA TODAY

Drug dealers are finding creative ways around new laws that crack down on “pill mills” dispensing powerful painkillers such as oxycodone.

In Florida, hundreds of people tried to open pharmacies after the state barred doctors from dispensing the narcotics directly from their clinics and forced patients to fill their prescriptions at pharmacies. Others moved their operations to Georgia, state police and federal agents say.

“Traffic flow in situations,” says Mark Trouville, special agent in charge of the Drug Enforcement Administration’s field offices in Florida. “They know once we put pressure on the pill mills, the wrong people would start opening pharmacies.”

Florida was the nation’s center of prescription-painkiller distribution until the state enacted laws last year aimed at pill mills — clinics where doctors perform cursory examinations on people with dubious injuries and dispense addictive painkillers.

Since then, the number of Florida doctors among the nation’s top 100 oxycodone-prescribers has declined. But reports of pill mills that have opened in neighboring states indicate that dealers are still peddling oxycodone illegally.

A pharmacy must register with the DEA and be licensed by the state to dispense controlled substances, which include many drugs that require a doctor’s prescription. The DEA can deny a registration if an applicant has been convicted of a drug-related crime or agents find a connection to a pill mill or other activity that poses a threat to public health and safety.

At least 37 pharmacy applicants withdrew their applications in 2011, Trouville says. “They feel the squeeze and move on,” he says.

Still, questionable pharmacies are selling thousands of oxycodone and hydrocodone pills to people recruited by drug dealers to get prescriptions from pain clinics. “They’re not selling Band-Aids and aspirin,” Trouville says. “There’s no room but an empty room with a bulletproof window.”

Pharmacy applicants turned down in Florida often try their luck in Georgia, says Rick Allen, director of the Georgia Drugs and Narcotics Agency. Of new non-chain drugstore applications, about 95% have some connection to Florida, he says.

“The people come completely out of the blue with no pharmacy background and open a pharmacy in a sleazy strip mall right down the road from a pain clinic,” Allen says. “You do a cursory background on them, and they’re living in a doublewide in Pembroke Pines, Fla.”

The DEA is working with the Florida state attorney general’s office and the FBI to investigate whether the operators of pill mills are involved in money laundering and other financial crimes.

The Swing State’s most controversial election is over. Florida, Iowa, Wisconsin, New Hampshire, Ohio, Pennsylvania, Virginia, and Michigan are among the top states of 2012.

In Florida, Gingrich led Romney in the early primary contests. Gingrich, 68, a former Speaker of the House, had a comfortable lead in the state of Arizona’s primary, while Romney was popular in the state of New Hampshire.

Romney, who is the first female senator from New Hampshire, will be the Republican nominee if he wins the state’s primary in Feb.

By Donna Leinwand Leger
USA TODAY

The state’s population is 16.5 million people, with 47% of the population residing in the Miami metropolitan area. The state has a large Hispanic population, with more than 3 million people speaking Spanish as their first language.

Nearly six in 10 respondents say they have; 42% say they do not have; and 17% say they do not have a health insurance policy. Among those who do not have a policy, 38% say they do not have a health insurance policy.

Neither the president nor the governor have a policy. The state has a large Latino population, with more than 10 million people speaking Spanish as their first language.
Who is Applying?

- An individual who is tied to Organized Crime
- An individual who works at Boston Market
- An individual whose father owns a pain clinic
- An individual whose mother works at a pain clinic
- An individual whose father is a doctor at a pain clinic
- An individual who is a bartender/exotic dancer
- An individual who is a truck driver
- An individual who is retired from the dry wall business
- An individual who is a secretary at a pain clinic
- An individual who runs a lawn care business
Response

Enforcement and Regulatory Action

• Investigating/Inspecting all new and renewal pharmacy applications submitted in Florida

• Investigating/Inspecting existing pharmacies registrations

• Results
  – Withdrawal of applications
  – Orders To Show Cause (OTSC) issued against applications
  – Immediate Suspension Orders (ISO) issued as appropriate
The Last Line of Defense
The responsibility for the proper prescribing and dispensing of controlled substances is upon the prescribing practitioner, but a corresponding responsibility rests with the pharmacist who fills the prescription.

An order purporting to be a prescription issued not in the usual course of professional treatment or in legitimate and authorized research is not a prescription within the meaning and intent of Section 309 of the act (21 USC 829) and the person knowingly filling such a purported prescription, as well as the person issuing it, shall be subject to the penalties provided for violations of the provisions of law relating to controlled substances.
Potential Red Flags

many customers receiving the same combination of prescriptions

many customers receiving the same strength of controlled substances;

many customers paying cash for their prescriptions;

many customers with the same diagnosis codes written on their prescriptions;

individuals driving long distances to visit physicians and/or to fill prescriptions;

customers coming into the pharmacy in groups, each with the same prescriptions issued by the same physician; and

customers with prescriptions for controlled substances written by physicians not associated with pain management (i.e., pediatricians, gynecologists, ophthalmologists, etc.).
Thank You!
Questions