



# Indian Health Service 2012 NATIONAL BEHAVIORAL HEALTH CONFERENCE

## Welcome

Prescription Drug Abuse  
Tiffany Elton Pharm.D., NCPS



*Mobilizing Partnerships to Promote Wellness*

# House Keeping

- Please be sure to sign in and out on the Sign In Sheets located near the entrance to this room.
- Please complete the evaluation at the end of this presentation.
- For more information on Continuing Education Units (CEUs), please visit the Registration Desk

# Comfort Room

- To promote wellness and self-care, a Comfort Room is available in Atrium Room 8 for your use.
- If you need further assistance, please visit the Indian Health Service Division of Behavioral Health booth.

# Partnerships

- Special thanks to Kenzie Guzzo-Hohman Pharm.D. - UMD College of Pharmacy for her contributions to this presentation
- Special thanks to Dr. Michael Hooten - Mayo Clinic for joining us today to provide further discussions about pain management strategies

**Indian Health Service**  
**2012 NATIONAL BEHAVIORAL**  
**HEALTH CONFERENCE**  
**Prescription Drug Abuse**

June 27, 2012

Tiffany Elton Pharm.D., NCPS



*Mobilizing Partnerships to Promote Wellness*

# Video

- Foundation for a Drug-Free World
  - The Truth about Prescription Painkillers
    - <http://www.drugfreeworld.org/real-life-stories/painkillers.html>



# The Headlines

Survey Finds First Time Abusers of Painkillers Get  
Them From Friends, Family

USA Today (4/25/12, Leger)

New Jersey Holds Summit on Prescription Drug  
Abuse

Record and Herald News (4/25/12, Sampson)

Kentucky Governor Signs New Law to Combat  
Prescription Drug Abuse

Louisville Courier-Journal (4/25/12, Ungar)



# The Headlines

Infants Born Addicted to Painkillers Tripled in  
Last Decade

-Bloomberg News (5/1/12, Ostrow)

Pharmacies Fueling Prescription Drug Trade?

-ABC News (5/6/12, P. Thomas)

Senate Inquiry Into Painkiller Makers' Ties

-The New York Times (5/9/12, Meier)



# Objectives

- Define prescription drug abuse
- Describe prevalence of issue
- Become familiar with drugs of abuse and the harmful effects
- Recognize signs of abuse/addiction
- Understand medication disposal policies

# Prescription Drug Abuse: Overview

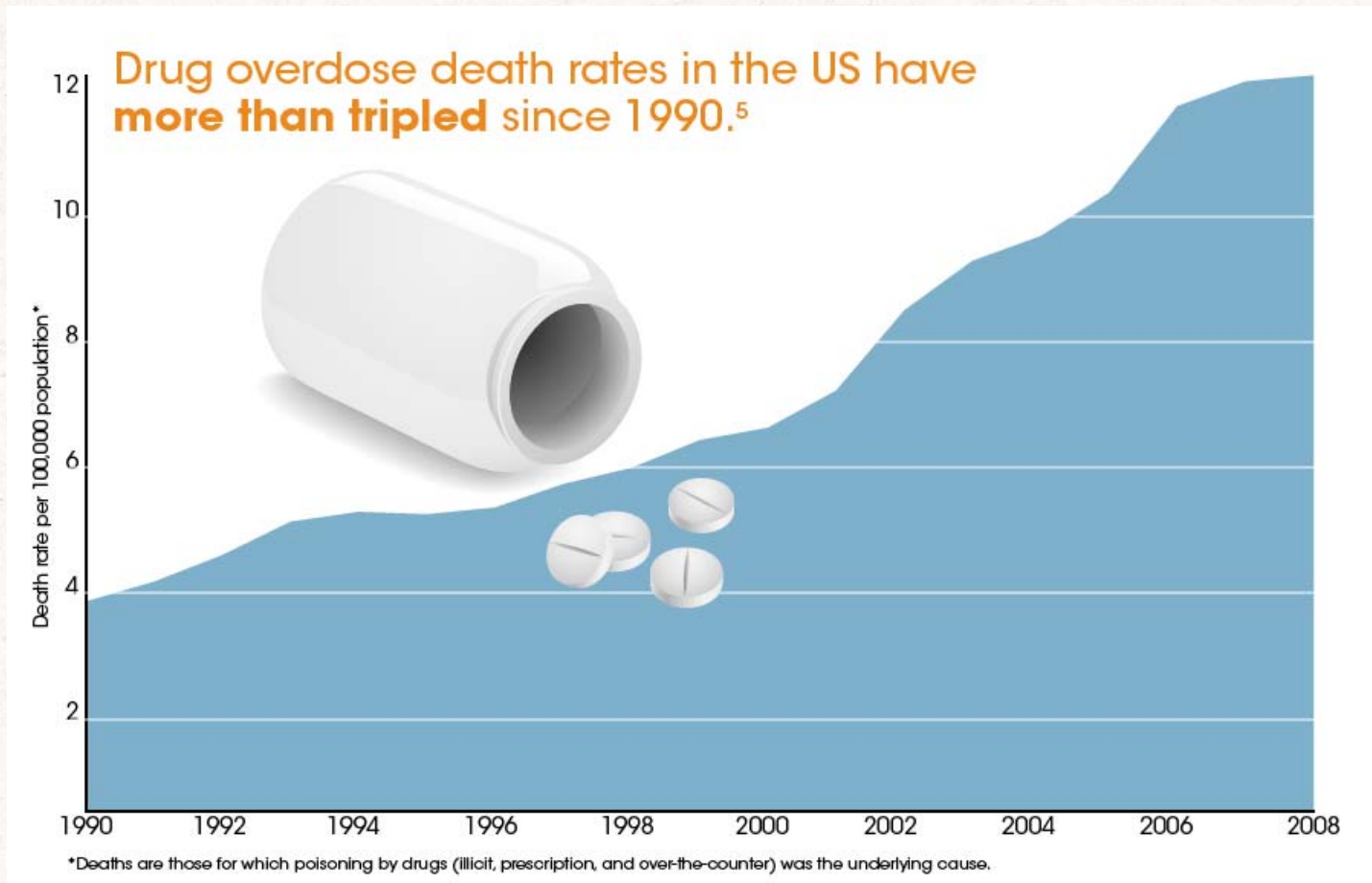
- Definition:
  - Use of a medication in a manner that deviates from medical, legal, and social standards

## Examples:

- Taking double the dose prescribed
- Crushing up a tablet and snorting it
- Taking a friend's prescription painkiller

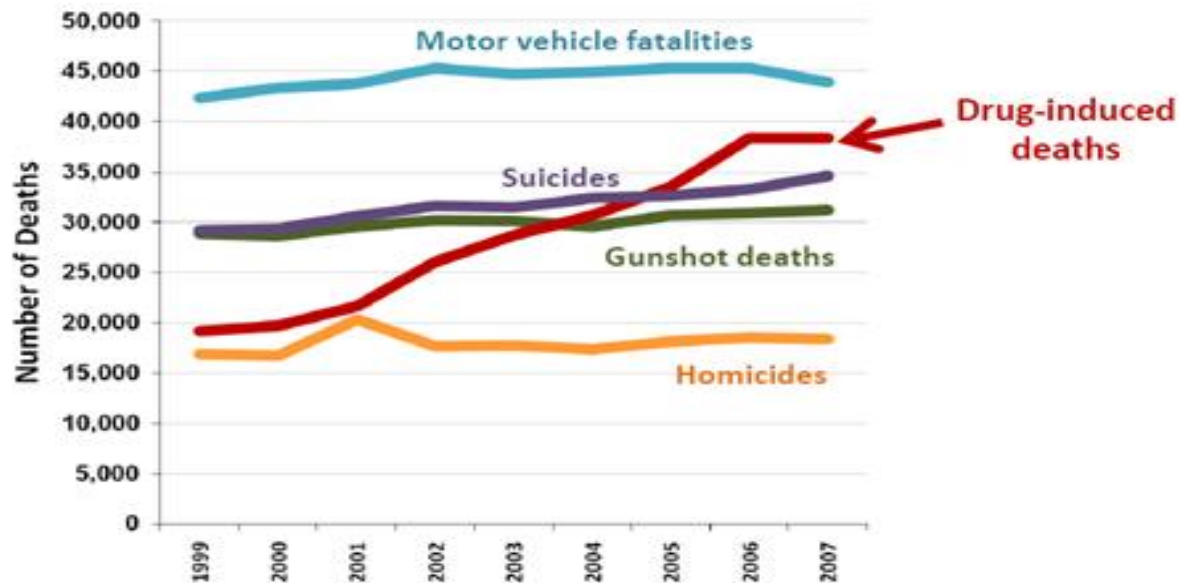


# Prescription Drug Abuse: Facts



# Prescription Drug Abuse: Facts

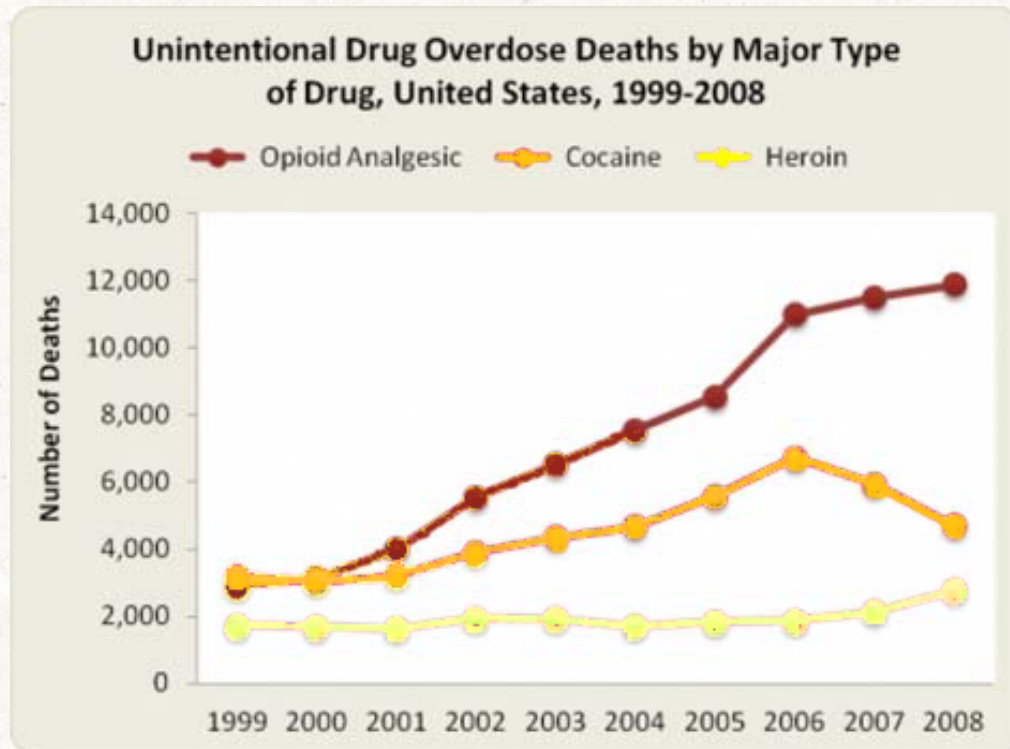
Drug-Induced Deaths Second Only to Motor Vehicle Fatalities, 1999–2007



Source: National Center for Health Statistics, Centers for Disease Control and Prevention. National Vital Statistics Reports *Deaths: Final Data for the years 1999 to 2007 (2001 to 2010)*.

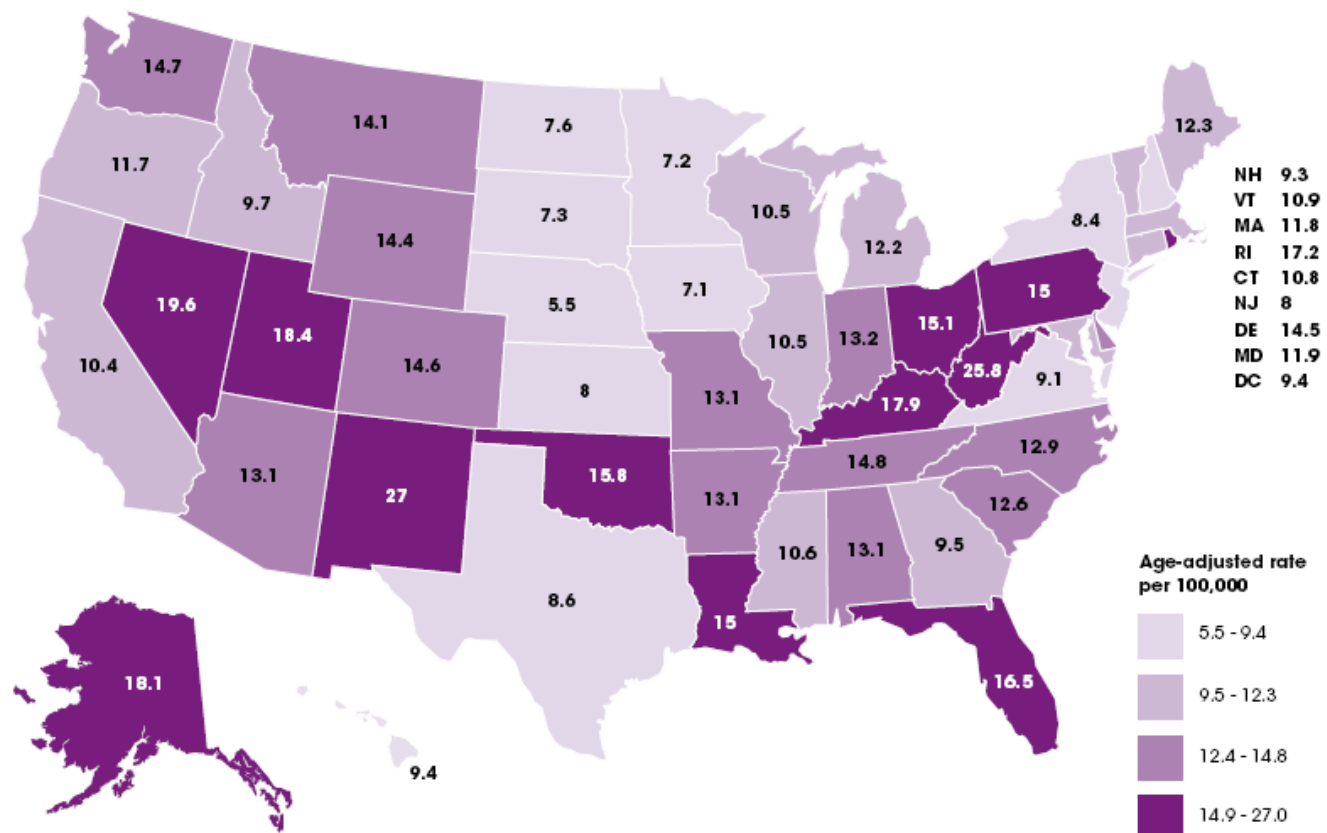
# Prescription Drug Abuse: Facts

- More overdose deaths than “street drugs”
- Painkillers alone = 15,000 deaths/year



# Prescription Drug Abuse: Facts

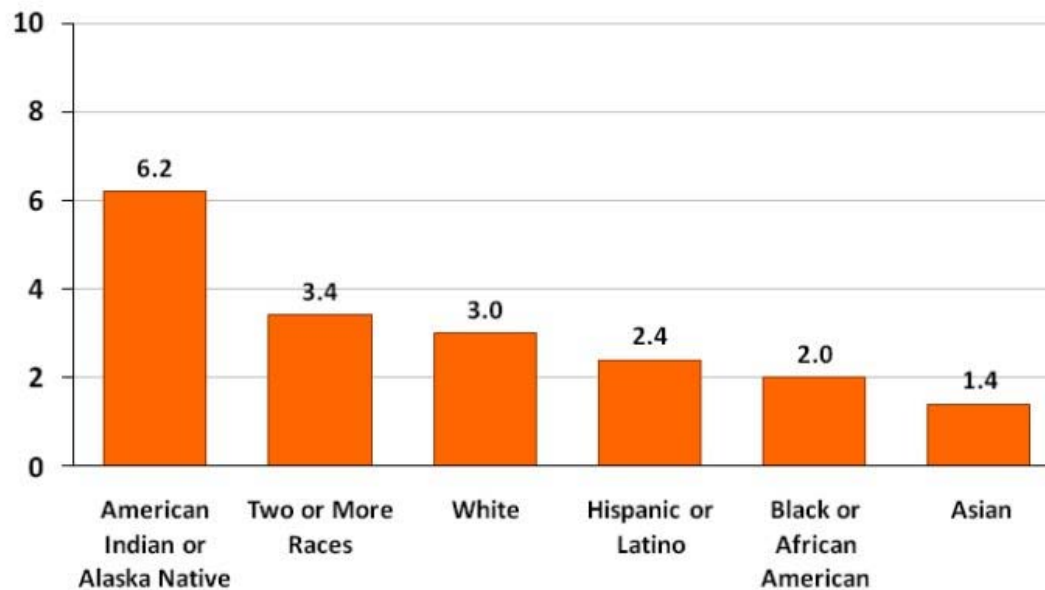
Drug overdose death rates by state, 2008<sup>4</sup>



# Prescription Drug Abuse: Facts

## Current Nonmedical Use of Prescription Drugs by Race/Ethnicity, 2009

Percent Using in Past Month (Ages 12 or older)



*Note: Due to low precision, estimates for Native Hawaiians or Other Pacific Islanders are not shown.*

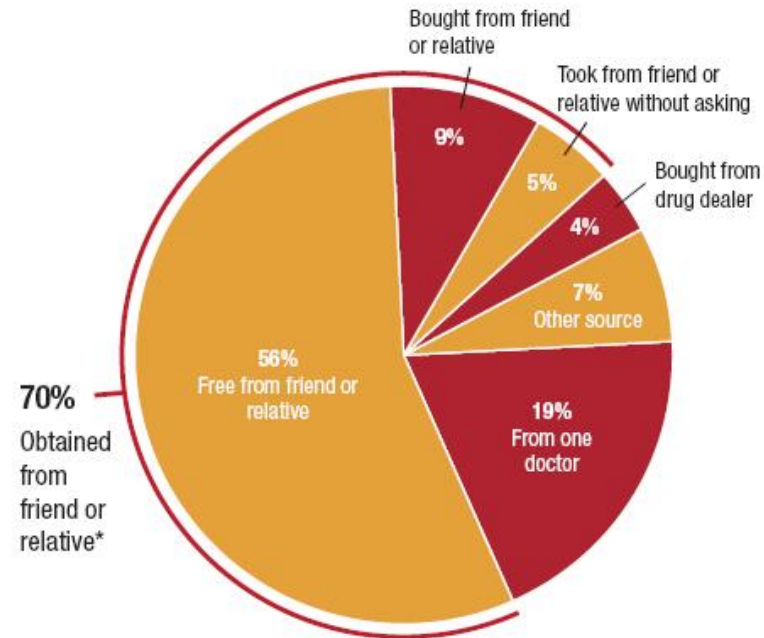
Source: SAMHSA, 2009 National Survey on Drug Use and Health (September 2010).

9/2010

# Why Prescription Drugs?

- Easy to obtain and often free
- Majority from friends and relatives

**Source of Pain Relievers for Most Recent Nonmedical Use Among Past Year Users 12 and Older**



**Past Year Nonmedical Users of Pain Relievers: 12.6 million**

\*Percentage from friend or relative is derived before rounding of individual sources.  
Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).



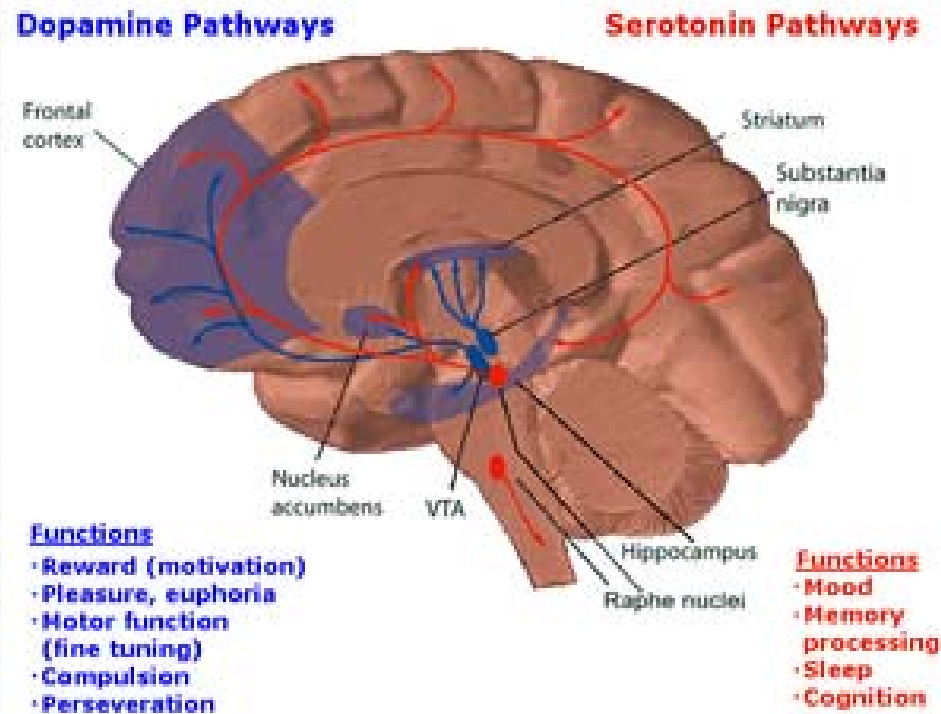
# Why Prescription Drugs?

- Believe there are:
  - Fewer side effects
  - Less shame with use
  - Not illegal



# Pathogenesis of Abuse and Addiction

- Neurophysiologic reinforcement
  - Dopamine release from VTA to the NA & Forebrain



# Pathogenesis of Abuse and Addiction

Contributing Factors:

- **Drug Characteristics**
  - Effect on Dopamine (DA)
  - Onset of Action
  - Route of Administration
- **Patient Characteristics**
  - History of Trauma/Abuse
  - Abnormalities in brain structure

# Prescription Drug Abuse

- **Tolerance:** need more for same effect
- **Dependence:**
  - Physical – normal physiological adaptation
  - Psychological – immediate pleasurable effect
- **Addiction:** drug-seeking behavior, use despite adverse consequences
- Risks are dose-dependent and increase when used in combination or with alcohol

# Signs of Abuse/Addiction

Key is **change**:

- Change in mood
- Problems at work, home, etc.
- Change in appearance
- Physical health issues

# Prescription Drug Abuse

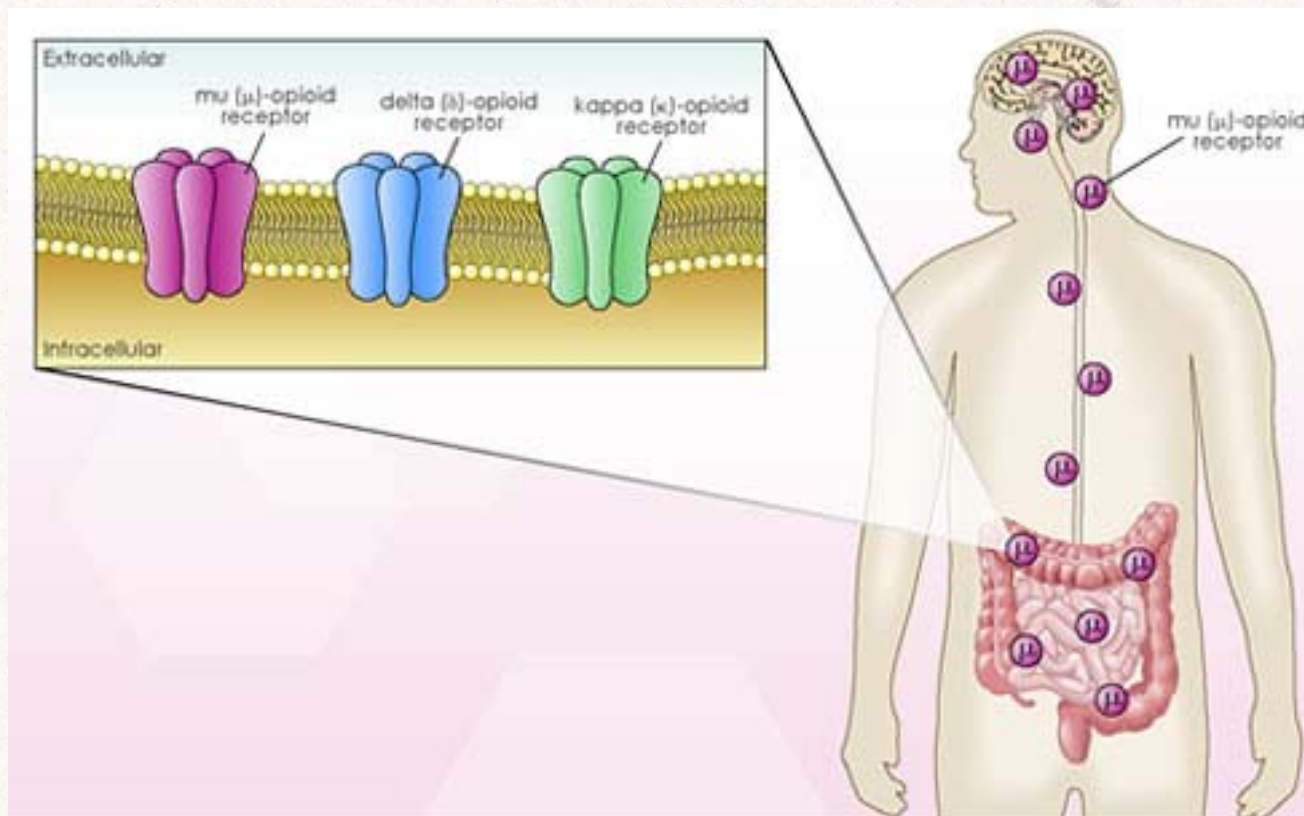
- Withdrawal Syndrome
  - More common with:
    - Chronic use
    - High doses
    - *Abrupt* termination
    - Drugs with short half-lives
    - Faster absorption
  - Symptoms opposite of the Mechanism of Action

# Medications Commonly Abused

- **Opioids**
  - *Hydrocodone, morphine, fentanyl, methadone, oxycodone*
- **Depressants**
  - Barbiturates: *phenobarbital, butalbital*
  - Benzodiazepines: *lorazepam, diazepam*
  - Sleep Meds: *zolpidem, eszopiclone*
- **Stimulants**
  - Amphetamines: *Adderall®*
  - Methylphenidate: *Ritalin®, Concerta®*

# OPIOIDS

- Mechanism Of Action: *opioid receptor agonist*





# OPIOIDS

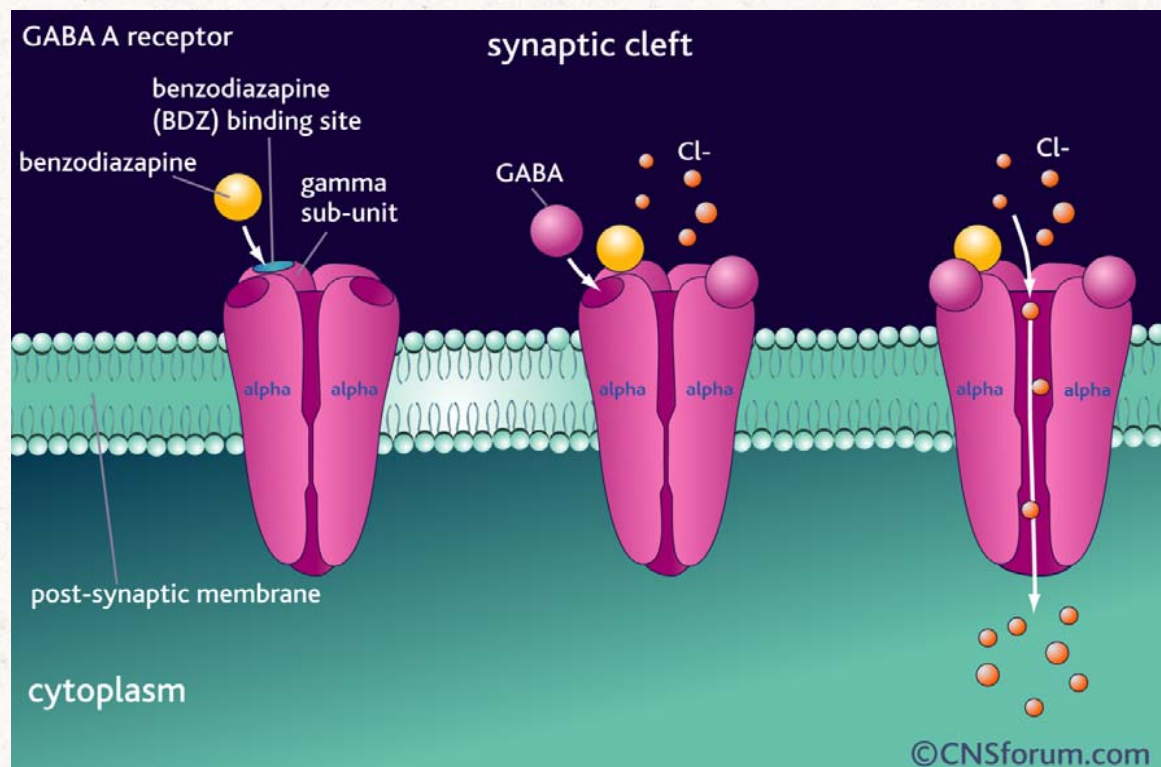
Drug Category	Intoxication Effects/Health Risks
<p><b>Opioids</b> <i>-hydrocodone (Vicodin®), fentanyl (Duragesic®), oxycodone (Oxycontin®), oxymorphone (Opana®), morphine, methadone, codeine, tramadol</i></p>	<ul style="list-style-type: none"><li>•Euphoria, drowsiness, sedation</li><li>•Impaired coordination, weakness, confusion</li><li>•Respiratory depression, lowered BP/P</li><li>•Unconsciousness, coma</li></ul>

**Administration:** oral, injected, smoked, snorted, rectal

**Withdrawal:** irritability, cramps, muscle aches, N, sweating, fever, HTN, tachycardia

# DEPRESSANTS

- Mechanism Of Action: *GABA* receptor activation



# DEPRESSANTS

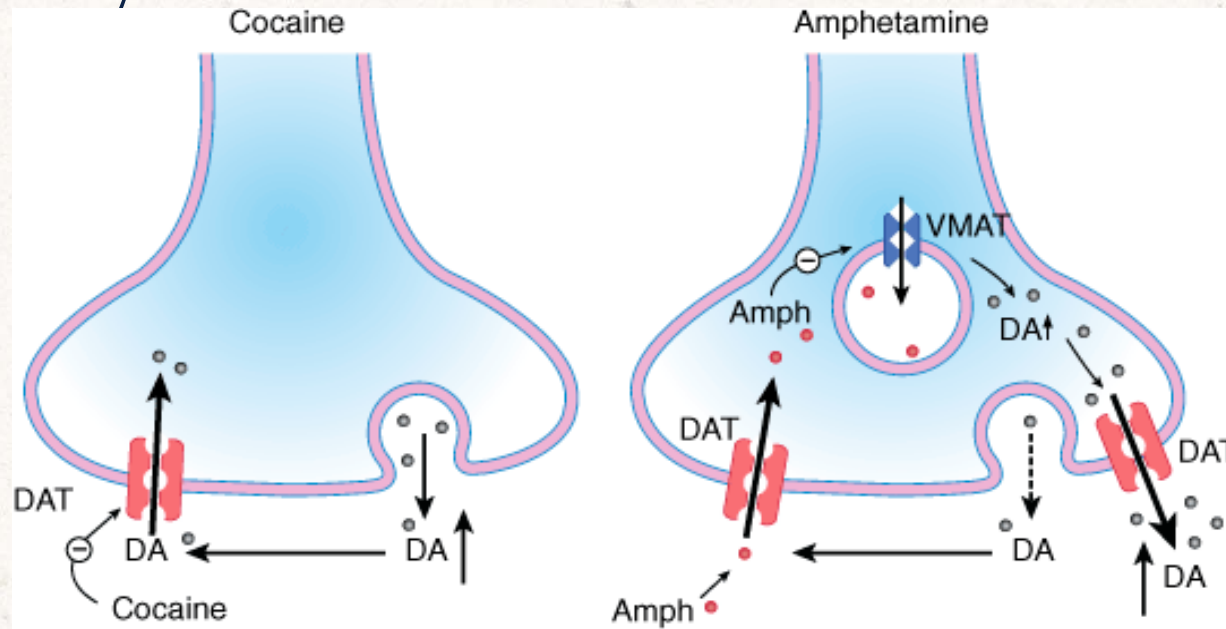
Drug Category	Intoxication Effects/Health Risks
<p><b>Depressants</b></p> <ul style="list-style-type: none"><li>-Barbiturates: <i>phenobarbital, butalbital</i></li><li>-Benzodiazepines: <i>lorazepam (Ativan®), clonazepam (Klonopin®)</i></li><li>-Sleep Meds: <i>zolpidem (Ambien®), eszopiclone (Lunesta®)</i></li></ul>	<ul style="list-style-type: none"><li>•Drowsiness, sedation, slurred speech, poor concentration, confusion, dizziness, nystagmus</li><li>•Impaired coordination and memory</li><li>•Respiratory depression, lowered BP/P</li></ul>

**Administration:** oral

**Withdrawal:** tremors, N, sweating, HTN, seizures

# STIMULANTS

- Mechanism Of Action: *increases DA release and inhibits reuptake*



Source: Katzung BG, Masters SB, Trevor AJ: *Basic & Clinical Pharmacology*, 11th Edition: <http://www.accessmedicine.com>  
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# STIMULANTS

Drug Category	Intoxication Effects/Health Risks
<b>Stimulants</b> -Amphetamines: <i>Adderall</i> ® -Methylphenidate: <i>Ritalin</i> ®, <i>Concerta</i> ®	<ul style="list-style-type: none"><li>•Increased BP/HR</li><li>•Nervousness, insomnia, reduced appetite</li><li>•Panic, paranoia, irritability, hallucinations</li><li>•Seizures, MI, stroke</li></ul>

**Administration:** oral, injected, smoked, snorted

**Withdrawal:** dysphoria, sleepiness, fatigue, bradycardia

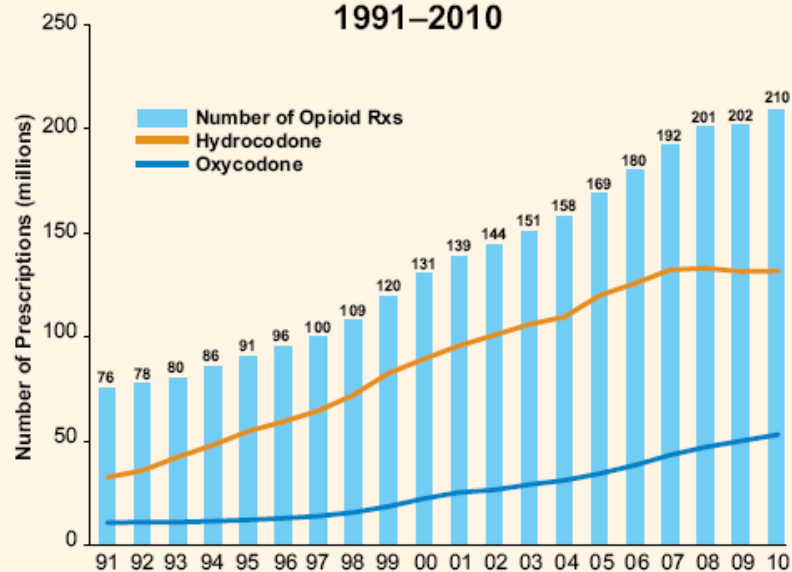
# Other Medications Abused

- **Gabapentin**
  - MOA: unknown
  - Structurally related to GABA
- **Bupropion (Wellbutrin<sup>®</sup>)**
  - MOA: DA & NE reuptake inhibitor
  - “Jailhouse meth/crack”
- **Quetiapine (Seroquel<sup>®</sup>)**
  - MOA: D<sub>2</sub> and 5-HT<sub>2</sub> receptor antagonism



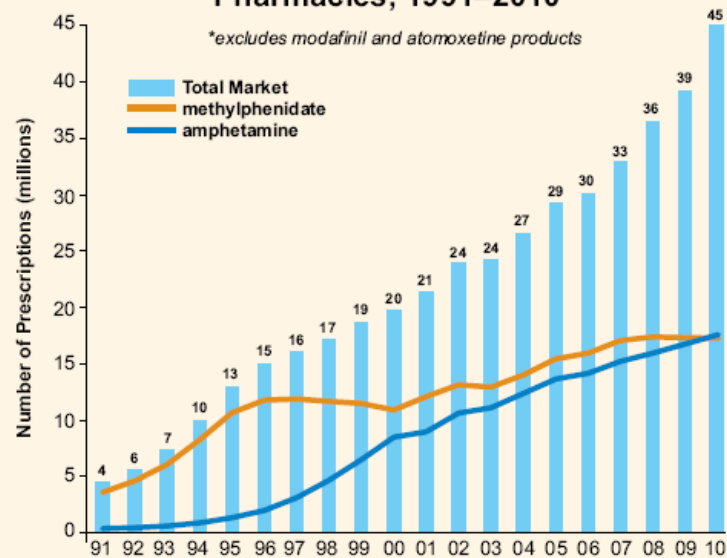
**Where Do We Go From Here?**

### Total Number of Opioid Prescriptions Dispensed by U.S. Retail Pharmacies, 1991–2010



Source: SDI's Vector One®: National (VONA)

### Total Number of Prescriptions for Stimulants\* Dispensed by U.S. Retail Pharmacies, 1991–2010



Source: SDI's Vector One®: National (VONA)



# Where Do We Go From Here?

- Medical providers must:
  - Prescribe medications responsibly
  - Educate
    - Addictive potential
    - Safe storage and disposal
  - Utilize Prescription Drug Monitoring Programs
    - <http://pmp.pharmacy.state.mn.us/index.html>
  - Engage patients in balanced treatment plans for pain management, anxiety, depression, ADHD, etc...
    - These treatment plans may/may not include prescription medications

# Medication Storage & Disposal

- Patients should be advised to:
  - Monitor medications in home
    - Keep medications in a safe place
  - Check Dates - Dispose of expired medications
  - Dispose of anything:
    - Not used in past year
    - No longer needed
    - No longer in original container

# Medication Disposal

- Rx Disposal Points
  - Pharmacies cannot legally take-back and destroy medications that are controlled substances
  - Pharmacies can contract with a waste management company to take-back non-controlled substances
    - Drugs should be destroyed by incineration (i.e. Stericycle)
  - Home disposal
    - Add water and kitty litter, soap, dirt, (inedible substances) → dispose of at home
  - Police department drop-box
  - DEA sponsored take-back events

# Conclusions

- Rx drug abuse is a growing problem.
- Opioids are the most common drug class abused today.
- Watch for signs of Addiction/Abuse. Funnel patients to the appropriate resources.
- Charge healthcare teams to create new strategies to treat patients and combat this problem.
- Find/create opportunities for proper medication disposal within your communities. Educate patients on proper medication disposal.

# References

- AWA RxE. National Association of Boards of Pharmacy Foundation. [www.awarerx.org](http://www.awarerx.org).
- Center for Disease Control and Prevention. Vital Signs. November 2011. <http://www.cdc.gov/VitalSigns/PainkillerOverdoses/>
- Policy Impact: Prescription Painkiller Overdoses. National Center for Injury Prevention and Control. Division of Unintentional Injury Prevention. Center for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalafety/rxbrief/>
- National Institute on Drug Abuse (NIDA). <http://www.drugabuse.gov/drugs-abuse/prescription-medications>
- National Youth Anti-Drug Media Campaign. [theantidrug.com](http://theantidrug.com)
- Office of National Drug Control Policy. Collaborating with Native Americans and Alaskan Natives. <http://www.whitehouse.gov/ondcp/native-americans-and-alaskan-indians>
- Office of National Drug Control Policy. Prescription Drug Abuse. <http://www.whitehouse.gov/ondcp>



# QUESTIONS



# Contact Information

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# Crisis Hotline Numbers

Suicide Prevention Lifeline Number:

- 1-800-273-TALK (8255)

National Domestic Violence Hotline:

- 1-800-799-SAFE (7233) or TTY 1-800-787-3224

National Child Abuse Hotline:

- 1-800-4-A-CHILD

Sexual Assault Hotline:

- 1-800-262-9800