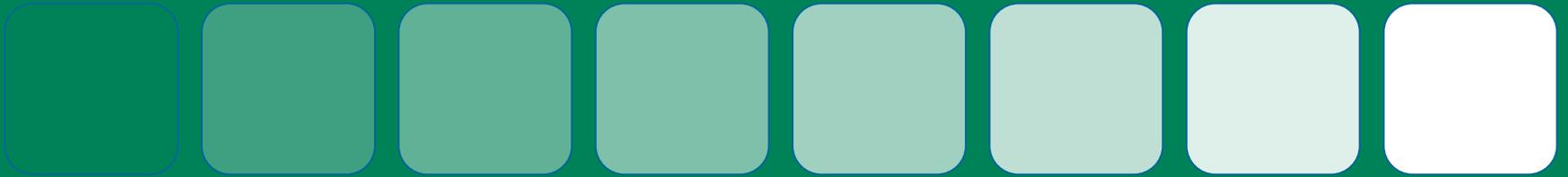
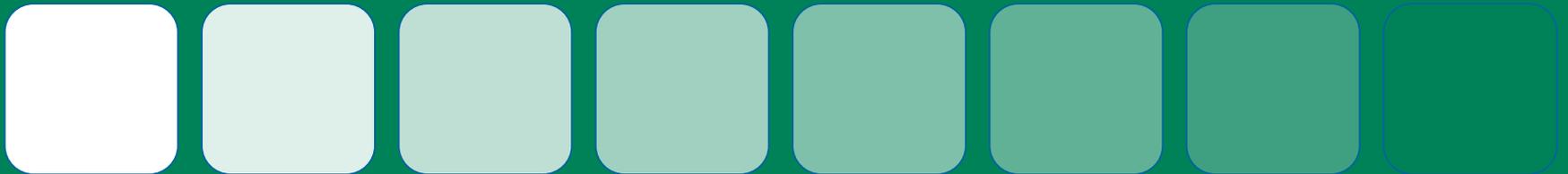




# Pharmaceutical Trends

Pharmaceutical  
Investigations (ODP)





# **Abuse**

- **In 2008, 6.2 million Americans used prescription-type psychotherapeutic drugs for non-medical purposes in a one-month period (2.5% of the U.S. population)**
  - More than cocaine, heroin, hallucinogens and inhalants combined
- **In 2008, among all illicit drug categories, non-medical use of prescription pain relievers tied with marijuana with the highest rate of new abusers (2.2 million).**
- **From 2002 to 2008, increase in young adults (age 18-25) rate of non-medical use of prescription pain relievers (4.1 to 4.6%)**
- **In 2008, 5.9% of young adults (age 18 to 25) used psychotherapeutic drugs for non-medical purposes.**



# ***Emergency Room Data***

- **From 2004 to 2006**
  - No Significant Change: ER visits attributable to cocaine, heroin, marijuana, and stimulants (the major illicit drugs)
  - Increase of 44%: ER visits attributable to pharmaceuticals alone (*i.e.*, with no other type of drug)
- **Drugs most frequently implicated in non-medical use:**
  - Benzodiazepines (Valium<sup>®</sup>, Xanax<sup>®</sup>) 36% increase
  - Hydrocodone/combinations (Norco<sup>®</sup>, Vicodin<sup>®</sup>) 44% increase
  - Oxycodone/combinations (OxyContin<sup>®</sup>) 56% increase



# ***Emergency Room Data***

- **Portland-Vancouver-Beaverton Metro Area**
  - 2007 emergency room reporting
  - 161 total reported drug-related accidental deaths
  - 99 (61%) deaths involved prescription opiates/opioids, to include oxycodone, hydrocodone, morphine, codeine
  - Of the 99, 40 deaths involved Methadone (25% of total)

SOURCE: 2006 DAWN (Drug Abuse Warning Network) report published August 2008 (most recent data)



# ***Teen Attitudes***

- **Parents are still not discussing the risks of abusing prescription and over-the-counter medicines despite the increase in parent/teen discussions about the risks of illegal drugs**
  - Only 24% of teens report that their parents talked with them about the dangers of abusing prescription (Rx) drugs or use of medications outside of a doctor's supervision
  - Just 18% of teens say their parents discuss the risks of abusing over-the-counter (OTC) cough medicine



# ***Teen Abuse***

- **The abuse of prescription medicines among teens continues to be a troubling trend<sup>1</sup>**
  - Teens mistakenly believe that abuse of prescription drugs is less dangerous than abuse of illegal street drugs
  - Teens report prescription drugs are easier to get than illegal drugs, up significantly from 2005
  - 10% of teens report having abused a Rx pain reliever
- **Prescription drugs “used to get high”; more teens reported them as “easier to obtain” than beer<sup>2</sup>**
  - 35% said they could obtain within a day
  - 26% said they could obtain within an hour

SOURCES:

1. 2008 Partnership Attitude and Tracking Study (PATS) Released FEB 2009 by The Partnership for a Drug-Free America
2. National Survey of American Attitudes on Substance Abuse XIV, August 2009, Columbia University

# Drugs of Concern

- Hydrocodone (Schedule III)
- OxyContin<sup>®</sup> (Schedule II)
- Fentanyl (Schedule II)
- Methadone (Schedule II)
- Cough Syrup (Schedule V)



# ***Hydrocodone (Schedule III)***

- **Trade names:**
  - Vicodin<sup>®</sup>, Lortab<sup>®</sup>, Lorcet<sup>®</sup>, Norco<sup>®</sup>
- **Street prices: \$1 to \$3 per tablet**
- **Hydrocodone/Acetaminophen mix-toxicity**
- **Similarities:**
  - Structurally related to codeine
  - Equal to morphine in producing opiate-like effects
- **From 2005 to 2007, non-medical use of Vicodin<sup>®</sup> increased<sup>3</sup>:**
  - 10th graders increased from 5.9% to 7.2%
  - 12th graders maintained an average 9.6%

<sup>3</sup>SOURCE: 2007 Monitoring the Future study released April 2008. MTF is conducted by the Institute for Social Research at the University of Michigan.



# ***Vicodin-5/500mg***





# ***Norco 7.5/325mg***





# **OxyContin<sup>®</sup> (Schedule II)**

- **Controlled release formulation of Schedule II Oxycodone**
  - Street Slang: “Hillbilly Heroin”
  - 10, 15, 20, 30, 40, 60, 80mg available
- **Effects:**
  - Similar to morphine in effects and potential for abuse/ dependence
- **Street prices: \$25 to \$80 per 80mg tablet**
- **Addiction, crime and fatal overdoses have all been reported as a result of OxyContin<sup>®</sup> abuse**
  - 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
  - Since 2002, use among 12th graders has remained between approximately 4% and 5%<sup>3</sup>

<sup>3</sup>SOURCE: 2007 Monitoring the Future study released April 2008



# ***Oxycontin- 80mg***





# ***Fentanyl (Schedule II)***

- **Trade-Names:**
  - Actiq<sup>®</sup>: dispensed in a berry flavored lollipop-type unit
  - Duragesic<sup>®</sup>: trans-dermal patch for chronic pain
  - Fentora<sup>™</sup>: effervescent tablet formulation
    - Approved by the FDA September 2006
    - Compared to same dose as Actiq<sup>®</sup>, the effervescent tablet allows a larger amount of Fentanyl to be absorbed rapidly through the oral membranes
- **Street prices: \$25 to \$40 per patch/lollipop**

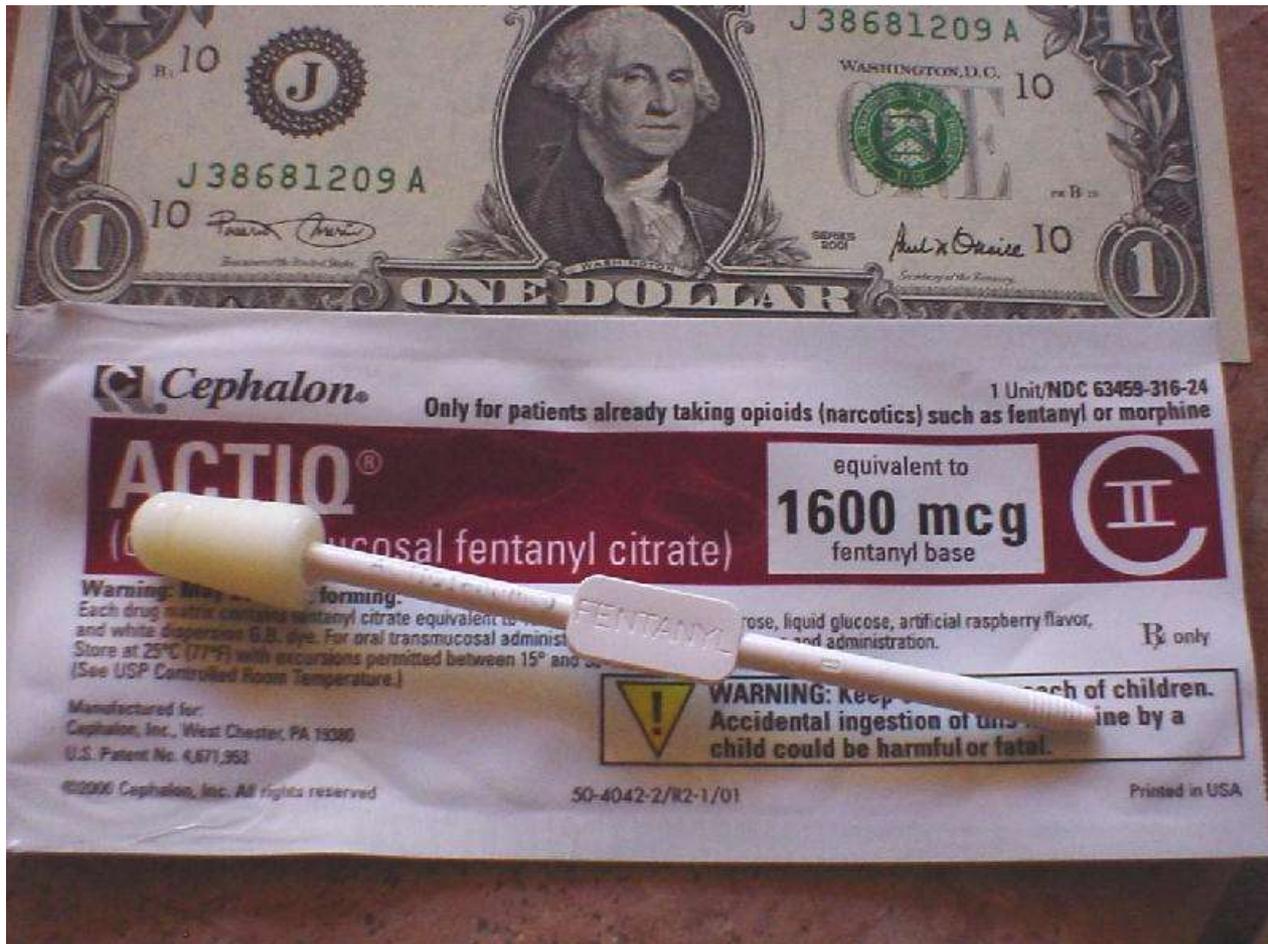


# ***Fentanyl - Abuse***

- **Fentanyl is 100x more potent than morphine**
- **Numerous reports of overdose deaths resulting from mixing Fentanyl with heroin or cocaine, or ingesting patch**
- **While most illegal use of Fentanyl is from diverted products**
  - Recent epidemic is linked mainly to illicitly manufactured Fentanyl
    - Previously, Fentanyl could only be made by expert chemists
    - New, easier synthetic method now available on the Internet
    - Inexpensive to manufacture with very high profit margin



# Fentanyl-Actiq 1600mcg





# ***Methadone (Schedule II)***

- **“Growing drug problem” (according to toxicology experts)**
- **Abuse linked to:**
  - Increased prescribing by doctors of methadone to treat pain
  - High level of diversion to illicit market
- **Increasing chances of an overdose**
  - Remains in the body much longer than other similar substances
  - Overdoses and deaths have quadrupled since 1999
- **Street Prices: \$2 to \$10 per 10mg tablet**



# ***Methadone-10mg***



Mallinckrodt Pharmaceuticals 10mg



# ***Cough Syrup (Schedule V)***

- **Promethazine with Codeine**
  - Hycotuss<sup>®</sup> syrup with hydrocodone (Schedule III)
- **Commonly sold in pint bottles**
- **Preferred abuse by mixing with Sprite<sup>®</sup>,  
Vodka/Rum, “Jolly Rancher,” and crushed  
Vicodin<sup>®</sup>**
- **Street Prices: \$250 to \$600 per pint**



# Promethazine with Codeine



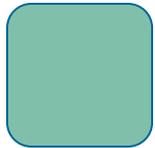
# Trends in Pharmaceutical Diversion



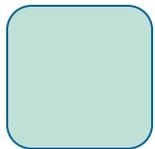
Doctor Shopping



Prescription Fraud



Theft



Internet Pharmacies



# ***Doctor Shopping***

- **Individual Patients**

- **Target Physicians**

- Obtain prescriptions from multiple physicians
    - Physicians willing to prescribe controlled substances over an extended period of time with little or no follow-up

- **Target Pharmacies**

- Utilize multiple pharmacies to fill the orders to avoid suspicion
    - Pharmacies known to dispense controlled substances without asking questions



# ***Doctor Shopping***

- **Trafficking Organizations**
  - **Recruit individuals to obtain narcotics**
    - Patients often have legitimate medical conditions (favorite targets: seniors, nursing homes, homeless shelters)
    - With cooperating physician or staff, patients never see physician
      - False identification, obtained from consenting individuals, used to “create” medical records and obtain scripts
    - Pay patients for their narcotics and services
  - **Target physicians**
    - Those known to prescribe with little or no follow-up
    - Sympathetic to patients’ medical situation
    - Commonly long distance from patients’ residence
  - **Utilize Medicaid (or state public health)**
    - Reduces cost of office visits and controlled substances at pharmacy
    - Increases profit margin



# ***Doctor Shopping***

- **Trafficking Organizations** (*continued*)
  - Well Organized
    - Often provide transportation of patients to/from physicians and pharmacies, or delivery of medication (maintains legitimate cover)
    - Maintain distribution outlets (sells both prescriptions and controlled substances)
  - Supported by “Pill-Mill” physicians and pharmacies
    - Physicians and pharmacies that “sell” scripts and narcotics to large numbers of drug seekers
    - Characteristics of pill-mill physicians



# ***Prescription Fraud***

- Fake prescriptions
  - Highly organized
  - Use real physician name and DEA Registrant Number
    - Contact Information false or “fake office”
    - Organizations set-up actual offices with contact information and staff (change locations often to avoid detection)
  - Prescription printing services utilized
    - Not required to ask questions or verify information printed
    - Use of out of state internet based printing services
    - Licensing of printing services in some states to reduce fraud
- Stolen prescriptions
  - Forged
  - “Smurfed” to large number of different pharmacies



# ***Theft***

- **Common “behind the counter” thefts**
  - Lack of adequate background checks of pharmacy staff
  - Systematic
    - Use computer ordering system
    - Take possession at time of delivery (prior to inventory)
- **Target Schedule III thru V**
  - Inventory requirements vary by State
  - Schedule II security more stringent
- **Pharmacy and delivery vehicles**
  - Burglary/robbery
  - Known distribution organizations



# ***Internet Pharmacies***

## ■ **Ryan Haight Act**

- Legislation to document/register internet pharmacies
- Separate identification of
  - Brick and mortar pharmacies
  - Physicians
  - Web-site facilities

## ■ **Prosecution Issues**

- “Valid prescription,” one in-person visit; legitimate medical purpose
- Amends 21 USC 841; Internet-related violations
- Increases statutory sentencing ranges for Schedules III thru V
- State civil action in federal court
- “Off-shore” pharmacies and facilitators; Import violations

# Additional Facts...



Cocktails



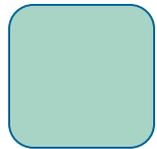
Schedule V Cough Syrup



Street Gangs



Places of Interest



Prescription Drug Monitoring



Outside the Scope



# **Cocktails**

- **Common identification of pattern of abuse by physicians and users**
- **Maximizes effect of narcotic abuse-Opiate Potentiators**
- **Preferred Prescriptions- “Holy Trinity”**
  - Schedule II and III narcotics (Oxycontin<sup>®</sup>, Vicodin<sup>®</sup>)
  - Schedule IV Benzodiazapines (Xanax<sup>®</sup>, Valium<sup>®</sup>)
  - Non-Controlled Muscle Relaxants/Sedative (Soma<sup>®</sup>)
  - Non-Controlled Opioid Analgesic-Tramadol (Ultram<sup>®</sup>) substituted for schedule II/III narcotic
- **Pre-written prescriptions and medical records**
  - Sponsored by “Pill-Mill” physicians



# ***Cough Syrup***

- **Schedule V (Promethazine with Codeine)**
  - Hydrocodone based syrup (Hycotuss<sup>®</sup>), Schedule III
- **Sophisticated trafficking organizations**
  - Control diversion, storage, transportation, distribution, money laundering
- **Closed-door pharmacies facilitating**
  - Use of DEA registration number utilizing small distributors
  - Owners/pharmacists being paid for services/use
  - Federal/State reporting and inventory requirements are relaxed based on drug schedule



# ***Cough Syrup***

- **Large profit margin**
  - Diverted wholesale/retail price (\$8 to \$12/pint) vs. street price (\$250 to \$600/pint)
- **Remedies**
  - Target money laundering prosecution and asset forfeiture
  - Schedule V, federal misdemeanor offense (state felony)
  - Ryan Haight increased guidelines for Schedule V (second offenders)



# ***Street Gangs***

- **Pharmaceutical trafficking by traditional street gangs**
  - No reliance on outside SOS's (*e.g.* illicit narcotics)
  - Non-dependence maintains control
  - Prescription-fraud prevalent
  - Established distribution channels, poly-drug
  - Personnel to support pharmacy smurfing activities



# ***Places of Interest***

## ■ **East Coast: Florida Pain Clinics**

- Heavy concentrations in Miami-Dade, Broward and West Palm Beach counties
- MD visit and dispense from same location
- Primarily Cash; \$200 for initial MD visit, \$150 for follow-up visit
- \$825 to \$950 for cocktail (Soma<sup>®</sup>, Valium<sup>®</sup> & Oxycodone<sup>®</sup>)
- \$1.50 to \$2.00 per pill from non-affiliated Pharmacy
- \$3.00 to \$4.00 per pill from pain clinic's in-house Pharmacy
- Average 120 to 180 pills per prescription
- Out of state patients
  - Distribution to identified states of Maryland, Virginia, Kentucky, Tennessee, Ohio for \$30 to \$40 per pill
  - DTOs transport patients to clinics every two weeks to meet with as many doctors as possible during a 2-3 day timeframe



# ***Places of Interest***

- **West Coast: Los Angeles**
  - Large number of DEA registrants (physicians, pharmacies, distributors)
  - Distribution networks north along the west coast to Seattle
  - United States (Las Vegas); Houston, Louisiana, Memphis, Atlanta; U-Hauls and express mail services
  - Similar to Florida pain clinics; however, most clinics issue prescriptions which are filled at “approved” pharmacies (partnered with physicians)
  - Patients travel from all over California and out of state to visit “Pill Mill” clinics; regularly transported in by bus/van by distribution organizations



# ***Places of Interest***

## ■ **Houston:**

- Large number of DEA registrants (physicians, pharmacies, distributors)
- Distribution networks to neighboring states: Louisiana, Arkansas, and Mississippi
- Prescriptions are being filled in Texas, drugs then carried to state of origin
- Medical visits range from \$85 to \$100
- Average \$55 to fill prescription at quantities of 120 pills
- Drug most commonly written is hydrocodone



# ***Places of Interest***

## ■ **Houston (*continued*)**

- Try to keep as closed system (*i.e.* script is faxed to partnering pharmacy)
- Partnering pharmacy sells narcotics at a reduced rate to avoid extra scrutiny
- Owner's of pain clinics are usually non-DEA registrants
- Pain clinics will hire a medical director who is a DEA registrant
  - Sign blank prescription pads
  - Show up a clinic once every few days
  - Non-licensed PA's and foreign MD's will examine patients (customers) and fill-out signed prescriptions
- Legislation pending in Texas to correct deficiencies



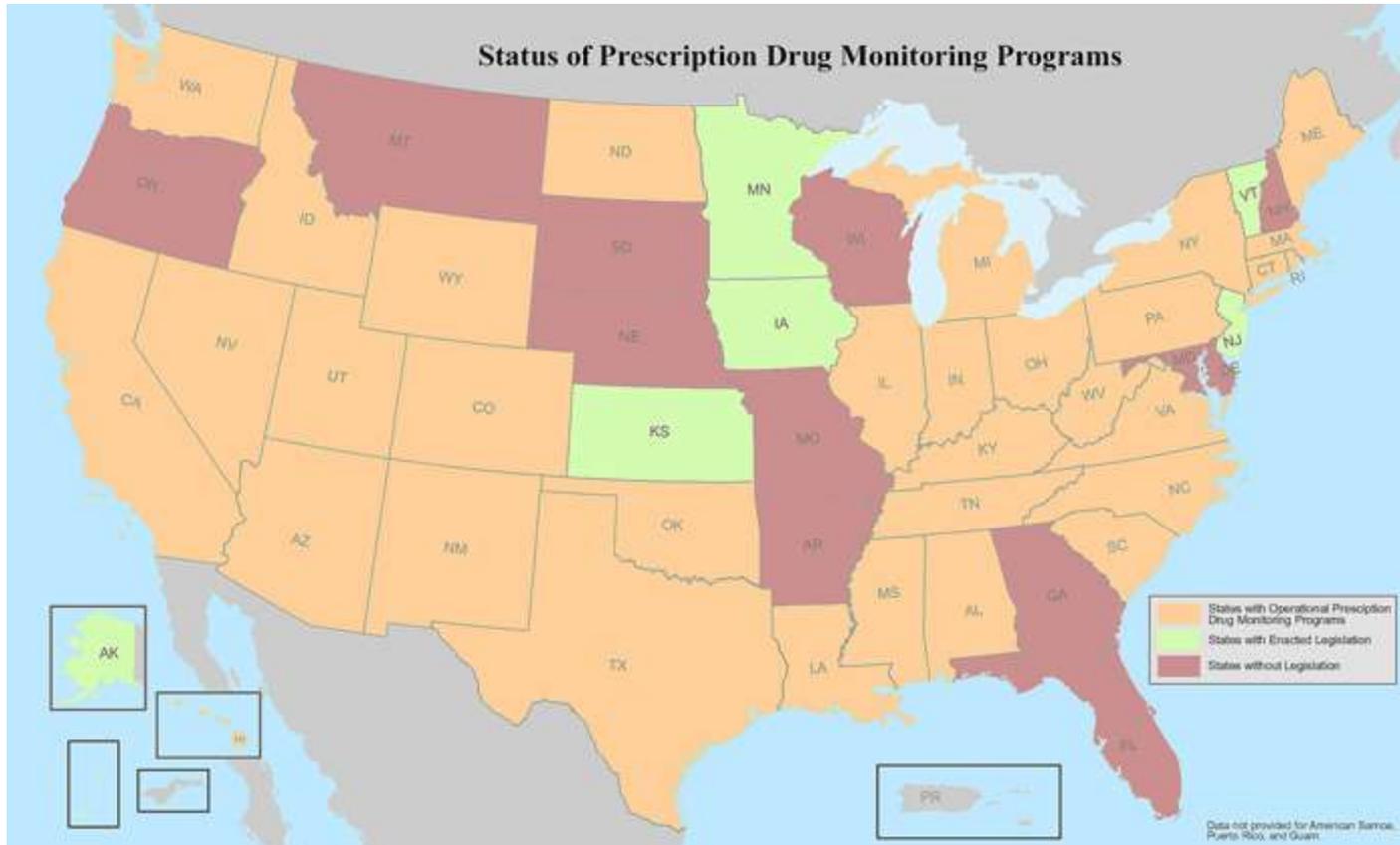
# ***Prescription Drug Monitoring***

- **Tool for physicians/pharmacies to prevent abuse**
- **Tool for law enforcement in investigating diversion**
- **Drug Schedules reported vary by state**
- **Sort by practitioner, pharmacy, patient**
- **As of January 2009:**
  - 32 States with operational Prescription Drug Monitoring Programs
  - 6 States with enacted programs not yet operational
  - 12 States with no program
  - Funded by federal grants



# Drug Monitoring Programs

## January 2009





# ***Outside the Scope***

- **Indicators/Probable Cause Factors**
  - Inordinately large quantities of controlled substances
  - Inordinately large quantities of prescriptions
  - Large numbers of young patients with chronic pain
  - No medical history/no physical exam or cursory exam
  - Referred pharmacies
  - Prescription intervals inconsistent with legitimate treatment
  - Physician/staff use street slang
  - No logical connection between drug and diagnosis/condition



# ***Outside the Scope***

- **Indicators/Probable Cause Factors (*continued*)**
  - Patients receive same drugs, or combination, regardless of diagnosis/condition
  - Physician writes scripts in 3<sup>rd</sup> party patient names
  - Physician will not write refills
  - Patients travel long distances
  - Large amounts of cash patients
  - Large amount of narcotic prescribing by non-pain specialists



# ***Emerging Trends, Etc***

- **Adderall abuse**

- Schedule II Amphetamine
- Used to treat ADHD, effective in weight loss
- Abuse prevalent among college students
- Used to enhance/lengthen academic performance
- Replace coffee and “Red Bull” type stimulants
- \$5.00 per pill on illicit market
- Tablet can be snorted, injected or smoked
- Highly addictive
- Sold on internet sites, such as Craigslist.com



# ***Emerging Trends, Etc***

- **Steroids in Dietary Supplements**
  - Professional sports controversy; athletes testing positive for banned substances blaming supplements
  - Dietary Supplements not regulated by FDA
    - FDA can only investigate if supplement found to cause harm following marketing
  - Anabolic Steroid: Any drug or hormonal substance chemically related to testosterone (see 21 CFR 1300.01 for prohibited list)
  - Schedule III Controlled Substance
  - New supplements containing synthetic steroids on market
  - Significant press interest, congressional review



# ***Emerging Trends, Etc***

- **Counterfeit pharmaceuticals**
  - Often obtained through internet sources, both domestic and foreign
  - Internet sources advertise on B2B sites, such as Alibaba.com, Tradeboss.com, etc.
  - Substances usually obtained through foreign wholesalers
  - Substances contain wide variety of ingredients, some toxic, or active ingredients in insufficient levels



# ***Emerging Trends, Etc***

- **Fentanyl laced Heroin**

- DEA investigations have found both imported and domestically modified heroin containing Fentanyl.
- Antidotal information includes duralgesic patches dried and then added to heroin