Prescription Drug Use, Abuse and Treatment

Richard Poppy MA, LISAC
Executive Director
Desert Star Addiction Recovery Center
Tucson, Arizona

Presentation Objectives:

Discuss: Prescription drug Use-Misuse, Abuse-Dependence, Compulsion - Addiction.
- Trends in the U.S., Arizona & Pima County
- Treatment
  - Screening
  - Interventions
  - Treatment

Trends: General, Adolescents & Elder Populations

- Alcohol
- Marijuana,
- Amphetamines
- Prescription Drugs; Opiate Benzodiazepines & Barbiturates
U.S. Public Policy Report

Financial Cost to society:
- Addiction: $276 billion dollars / year
- Heart Disease: $133 million / year
- Cancer: $96 billion / year

SAMSHA (Substance Abuse Mental Health Services Administration) 2008 Statistics:

Substance Use in The U.S.
- 16% of the U.S population addicted to Alcohol/Drugs
- 22 Million people needed treatment
- 3.5 million people received treatment
  - 2.2 million – Alcohol
  - 974,000 – Marajuna
  - 796,000 – cocaine
  - Methamphetamine Use has increased from 4% - 6% of population over past 10 years

Prescription Drug Abuse
- In 2008: 15.2 million Americans age 12 and older had taken a prescription pain reliever, tranquilizer, stimulant, or sedative for nonmedical purposes at least once in the year prior to being surveyed.
- 43% of patients entering ER rooms for overdose where from prescription meds.
Alcohol Use and Youth:

- Century Council 2008 Survey: 30% of 16-18 year old girls say they drank with friends while only 9% of their mothers thought they drank.

Underage Drinking: 2002 youth Survey Pima County:

- 8th graders: Drank at twice the national rate
- 8th graders: 42% drank in the past month (national 22%)
- 10th graders: 50% drank in the past month (10% higher than national)
- 12th graders: 59% drank in the past month (10% higher than national)

2002-2005 NIDA Survey (National Institute of Drug & Alcohol):

- 50,000 Teens in the U.S
- 21.4% of 8th graders used illicit drugs / prescription
- 38.2% of 10th graders used illicit drugs / prescription
- 50.4% of 12th graders used illicit drugs / prescription
2002-2005 NIDA Survey (Continued)
(National Institute of Drug & Alcohol):
50,000 Teens in the U.S.

- 12th graders Drug Use (2002-2005) Had used drugs in the past year
  1. Family Medicine Cabinet: 1:10 - tried prescription pain killers
  2. OxyContin use increased 4% > 5.5%
  3. Vicodin 9% > 9.5%
  5. Benzodiazepines 8%
  6. Meth 6.2%
  7. Cocaine 7.7%
  8. Tranquilizers 10.2%
  9. Hallucinogens (LSD, PCP, MDA / Ectasy) 10.6%
 10. Inhalants 11.2%
 11. Amphetamines 14.4%
 12. Marijuana 46.1%
 13. Cigarettes 53.7%
 14. Alcohol 76.6%

Alcohol Use and Elderly

- Retirement
- Change of life
- Baby Boomers
- Boredom
- Loneliness

Drug Use and the Elderly

- Persons 65 years of age comprise only 13 percent of the population, yet account for approximately one-third of all medications prescribed in the United States.
- Older patients are more likely to be prescribed long-term and multiple prescriptions, which could lead to unintentional misuse.
- The elderly also are at risk for prescription drug abuse, in which they intentionally take medications that are not medically necessary. In addition to prescription medications, a large percentage of older adults also use OTC medicines and dietary supplements.
Elderly Drug Use & Comorbidity

- Because of their high rates of comorbid illnesses, changes in drug metabolism with age, and the potential for drug interactions, prescription and OTC drug abuse and misuse can have more adverse health consequences among the elderly than are likely to be seen in a younger population.

Alcohol Use and the Elderly

- One-third of people over the age of 65 in North America drinks alcohol and 10% of them abuse alcohol
- 86 percent of elderly patients who end up getting treatment for a history of binge drinking, 76 percent began drinking heavily in mid or late life, according to a Canadian study.
- Women are even more likely to start heavy drinking later in life.

Hospital Cost: Elderly with substance abuse

- Substance abuse-related cases tend to be more expensive to treat than the average hospital case
- Medicare for substance abuse-related care accounted for 23 percent or nearly one-fourth of the total Medicare payments for hospital care,

*National Center on Addiction and Substance Abuse (CASA) at Columbia University.
Medical Marijuana
- Up to 30 times stronger than a decade ago
- Stays in the system for up to 2 months with chronic use, Stored in fat cells.
- Medical use: glaucoma, pain, nausea
- With Heavy / Chronic use - need less to get high
- California 3000 legal locations

Marijuana: Adolescent use
- Attitude: Benign substance
- More likely to drive under the influence
- Adolescent users are 6x more likely to cut class or skip school
- Adolescent users are 5x more likely to sell drugs
- Adolescent user are 5x more likely to steal
- More violent behavior
- Adolescent user are 4x more likely to physically attach people

Opiate / Opioid Use
- Prescription abuse
- Pain management
- Recreational use
- Anxiety
- Depression
- Alternatives
Basic Opioid Facts

Description: Opium-derived, or synthetics which relieve pain, produce morphine-like addiction, and relieve withdrawal from opioids

Medical Uses: Pain relief, cough suppression, diarrhea

Methods of Use: Intravenously injected, smoked, snorted, or orally administered

Opioids: Heroin, Morphine

- Oxycodone (e.g., OxyContin, Percodan)
  - Hydromorphone (Dilaudid)
  - Hydrocodone (e.g., Vicodine)
  - Fentanyl (patch, lozenge, solution)
- Methadone (diskette/wafer, pills, liquid)
- Buprenorphine (e.g., Suboxone, Subutex)
Societal Consequences of Opiate Addiction

- Untreated opiate addiction costs $20 billion per year (National Institute of Health, 1997)
- Increased criminal activity
- Increased health problems—HIV/Hep. C
- Disrupted personal and family relationships
- Deteriorating or loss of employment
- Destructive to communities

2002 National Survey on Drug Use and Health:

- An estimated 6.2 million persons (2.6% of the U.S. population aged 12 or older) were currently using certain prescription drugs nonmedically.
- An estimated 4.4 million were current users of pain relievers for nonmedical purposes.
- Approximately 1.9 million persons had used OxyContin nonmedically at least once in their lifetime.
- Non-medical pain reliever incidence increased from 1990 (628,000 initiates) to 2000, when there were 2.7 million new users.


Heroin Use in High Schools: Pima County

- Attitude: “If I only smoke it, I wouldn’t get addicted.”
- 3 Catalina High School Girls were arrested on felony drug charges:
  1. Smoking in the bathroom
  2. “on-again, off-again problem” … started up again this year with friends.
  3. “Heroin is not an uncommon drug”
  4. Used tube from her Bic pen to smoke it
  5. The girls used the same dealer: $50. of Black Tar

*An estimated 1% of High School students used heroin in the past month (U.S. Dept of Health & Human Services 2004)
Opiate/Opioid: What’s the Difference?

**Opiate**
- A term that refers to drugs or medications that are derived from the opium poppy, such as heroin, morphine, codeine, Vicodin and Buprenorphine.

**Opioid**
- A more general term that includes opiates as well as the synthetic drugs or medications, such as buprenorphine, methadone, meperidine (Demerol®), fentanyl—that produce analgesia and other effects similar to morphine.

Opium

SOURCE: www.streetdrugs.org
Heroin

Morphine

Prescription
Synthetics: Methadone …

- Darvocet

SOURCE: www.methadoneaddiction.net

Buprenorphine

Subutex: Mono Form

Suboxone (Buprenorphine or Bup): Combination of Subutex & Naloxone
Prescription Benzodiazepine

- Treatment anxiety, panic attacks, muscle spasms etc
- Central nervous system
- Relaxation
- Euphoria, sense of well being
- Temporary impairment of memory
- Impaired thinking, confusion
- Slurred speech, staggering gait
- Emotional instability
- Rohypnol, 10X potent as Valium

Benzodiazepines

- Muscle relaxer
- Anti – Anxiety medication
- Trauma
- Sedation, drozziness /dizziness

Benzo Abuse

- Mesa Arizona: Three 12- year old girls were taken to the hospital from overdose.
- Taken muscle relaxants that one of the girls had brought to school
- “Pharm parties”
Benzodiazepines

- Ativan (Lorazepam)
- Librium (Chlordiazepoxide)
- Xanax (Alprazolam)
- Klonopin (Clonazepam)
- Valium (Diazepam)

Benzodiazepine Abuse

- Elderly persons who take benzodiazepines are at increased risk for cognitive impairment associated with benzodiazepine use.
- Use may lead to possible falls (causing hip and thigh fractures), vehicle accidents.
- Cognitive impairment may be reversible once the drug is discontinued.

Barbiturates

- Pentobarbital (Nembutal)
- Secobarbital (Seconal)
- Amylobarbitol (Amytal)
- Seco-Amylobarbital combo (Tuinal)
- Depressants, anti-anxiety. Intoxication similar to Alcohol. Inhibition, impairment of short term memory, drowsy, dizzy.
- Mild loss of coordination
- Nausea, vomiting, stomach pain.
Club Drugs

- **MDMA**: Ecstasy, XTC, Clarity
  - Dilated pupils, quick jerky eye movements, blurred vision, sense of well-being, heightened sensory perceptions & insights.
  - Fast heart rate, dangerous high blood pressure & pulse
- **GHB**: Blue nitro, liquid ecstasy, G, Scoop
  - CNS depressant, increased energy, happiness, disinhibition and relaxation.
  - Amnesia, visual hallucinations
- **Ketamine**: Special K, Vitamin K, Cat Valium, Similar effects as PCP
  - Delirium, amnesia, impaired motor function, depression & potential fatal respiratory problem
- **Flunitrazepam**: Roofies, Roche, Forget-Me-Pill
  - 8-12 hours, increase affect with etoh, drowsy, dizzy, confusion, anterograde amnesia

Amphetamines/Stimulants

- **Speed**
- **Diet Pills**
- **Adderall (ADHD)**
- **Ritalin**

Adderall - Ritalin

- A high-achieving senior at a small northeastern university uses them
  “whenever I had to study for exams or do other time-consuming homework… I feel very awake and motivated and I'm able to get through schoolwork and studying much more productively.”
On Campus

- The requests for pills kick in about a week before mid-terms. And again right before finals.
- I got asked a lot during exams — every time I was at the library and saw one of my friends," says the freshman at a highly-competitive liberal arts college in the Midwest. "If it's my friends, I feel bad saying no."

Adderall (& Other Stimulant) Abuse on Campus

- Adderall abuse and the abuse of other prescription stimulants may be as prevalent as 15 to 20 percent of students, according to Amelia Arria, Ph.D., Senior Scientist at the Treatment Research Institute.
- 2005 study in the American Journal of College Health

Journal Pharmacotherapy 2007

- Showed that teens who reported illicit prescription stimulant use had significantly higher rates of alcohol and other drug use, including cocaine
- Students who began illicit prescription stimulant use in college were four times more likely to report three or more positive indicators on a standard drug abuse screening test than their peers who did not use stimulants.
College Student Reactions

“Honestly, it doesn't phase me all that much [when it was offered to me]. I don't have trouble focusing so it's not something I need, but it's not like if it was a street drug deal, hard drugs like cocaine or heroin…It's like this guy is offering drugs to help kids study. Maybe even because of the context, it seems less intimidating.”

Part of Academic Life

Students interviewed mostly commented on the normalization of prescription stimulant use as an accepted part of the competitive academic landscape of college life, one that seemed far safer and distinctly separate from street drug use.

Mixing w/ other Drugs

Mixing stimulants with other substances is a concern.

The half-life (the time it takes for half of a medication to be absorbed) of common ADHD medications ranges from 3-5 hours to 12-15 hours for extended-release formulations,

Making an adverse interaction between a stimulant and another substance, like alcohol, likely.
Dangers

- Risk for seizure or a cardiac event is heightened when these medications are combined with other stimulants, like cocaine,
- or when they interact with alcohol
- A stimulant may counter the depressive effect of alcohol, and students may drink more."

The 2008 Partnership Attitude Tracking Study

- A national survey of more than 6,500 teens ages 12-17,
- By the time teens get to college, they have already been exposed to pill sharing and swapping
- 1 in 5 teens has abused a prescription drug.
- 30 percent say they have a close friend who uses prescription stimulants.
- 50% say they got their pills from their family’s medicine cabinet or from friends.
- On campus, about 33% of the supply of these drugs comes from students who have been prescribed it for ADHD.
- 33% of people with ADHD are giving their medications away.

Methamphetamine:

- Same molecular structure as Ephedrine / Pseudoephrine … minus oxygen.
- In order to take out oxygen you “cook it”
- Recipes for cooking include the use of:
  1. Red Phosphorus
  2. Hydrochloric acid
  3. Anhydrous ammonia
  4. Drain cleaner
  5. Battery acid
  6. Lantern fuel
  7. Antifreeze
  8. Fertilizer
Arizona State Bills: Methamphetamine

- **HB 2460: Appropriations for Meth Treatment:** Undisclosed amount to DHS (Department of Health Services) for the treatment, prevention and Education for youths 12-18 years old.

- **HB 2493: Pseudoephedrine Sales:** Limits the sale of packaged products containing ephedrine or pseudoephedrine to blister packs containing not more than 2 dosage units. Purchaser must provide ID, drivers license or state ID, along w/description of how it is to be used and signature.

Steroids: “Roads”

- **Steroids:** Increase testosterone level; muscle mass, & strength.
- Hair loss, acne, aggressive behavior.
- M/F characteristic change.
- Curb growth (in youth)
Steroid Use in Adolescents Girls: University of Michigan study

- Rising steadily since 1991
- Most secret behavior
- 5% of high school girls
- 7% percent of middle school girls
- As young as 9 years old
- Majority use to get bigger & stronger on the athletic field
- Weight control and body fat reduction
- Some develop eating disorders

Steroid Use in Adolescents Girls: University of Michigan Study (Cont)

Side Effects in Teenage Girls:
- Severe acne
- Deeper voice
- Smaller Breast
- Irregular periods
- Excess facial and body hair
- Depression paranoia
- Fits of anger (“Road Rage”)
- Higher risks of heart attack, stroke and cancer.

Steroid Use in Adolescents: Purchase Drugs

- Black market
- Relative
- Friends
- Local Gym
- Internet
- Coaches
- Parents
Psychosocial Manifestations of Mild/Moderate Drug Disorders

- Social
  - Alienation and loss of old friends, gravitation toward others with similar lifestyle
- Legal
  - Arrests for disturbing the peace or driving while intoxicated, stealing, drug dealing
- Financial
  - Borrowing or owing money, selling personal or family possessions

(Brown, 1992)

Symptom Identification

- Applying quantity and frequency levels appropriate for younger adults to elders may cause failure to identify substance use problems
- Warning signs can be confused with or masked by concurrent illnesses and chronic conditions, or attributed to aging
  - Sleep problems associated with chronic conditions, particularly cardiovascular disease and pain
  - Falls attributed to poor lower body strength, poor balance, or vision limitations
- Anxiety attributed to psychosocial concerns
- Confusion/memory problems associated with Alzheimer’s disease or other dementias

Signs and Symptoms of Substance Use Problems in Older Adults

- Anxiety
- Blackouts, dizziness
- Depression
- Disorientation
- Mood swings
- Falls, bruises, burns
- Family problems
- Financial problems
- Headaches
- Incontinence
- Increased tolerance
- Legal difficulties
- Memory loss
- New problems in decision making
- Poor hygiene
- Seizures, idiopathic
- Sleep problems
- Social isolation
- Unusual response to medications
Signs and Symptoms of Substance Use Problems in Adolescents

- Anxiety
- Depression
- Mood swings
- Disorientation
- Family problems
- School problems
- Headaches
- Social isolation
- Change of friendship
- Apathy
- Increased tolerance
- Legal difficulties
- Memory problems
- Poor decision making
- Poor hygiene
- Seizures, idiopathic
- Sleep problems
- Unusual response to medications

Addiction as a Brain Disease

- Prolonged drug use
  - Pervasive changes in brain function that
    - Persist after drug use stops
    - Can be demonstrated at many levels
      - Molecular
      - Cellular
      - Structural
      - Functional
Dependence vs. Addiction:

NIDA - Summary

- **Addiction**: Refers to the pattern of continued use of drugs despite pathological behaviors and other negative consequences.

- **Dependence**: Refers to physical dependence on the substance as indicated by tolerance and withdrawal.

Compulsion

- “An irresistible persistent impulse to perform an act”

Narcotics Anonymous:

*Definition of Addiction*

- “the two things that make up true Addiction: Obsession and Compulsion.”
- “Obsession - that fixed idea that takes us back time and time again to our particular drug, or some substitute, to recapture the ease and comfort we once knew.”
- “Compulsion – once having started the process with one fix, one pill, or one drink we cannot stop through our own power of will. Because of our physical sensitivity to drugs, we are completely in the grip of a destructive power greater than ourselves.”
Alcoholics Anonymous:

Big Book of A.A., Defines Alcoholism (addiction) as:

- “An Allergy to alcohol”
- “the phenomenon of craving is limited to this class and never occurs in the average drinker
- “A malady of body, mind and spirit”
- “These allergic types can never safely use alcohol in any form at all; once having formed the habit and found they cannot break it…their problems pile up on them and become astonishingly difficult to overcome”
- “…the alcoholic mentality is a hopeless condition…”
- “The alcoholic at times has no effective defense against the first drink”

Substance Dependence (Addiction) DSM IV

- Pattern of substance use leading to impairment or distress within a 12 month period. 3 or more of the following for this DX.
  1. Increase or decrease in tolerance.
  2. Withdrawal or Symptoms of withdrawal.
  3. Using more, longer, than intended.
  4. Unsuccessful efforts to cut down or control use.
  5. Lots of time spent in obtaining, using or recovering from effects of drug.
  6. Give up personal, social, occupational, and/or recreational activities because of drug use.
  7. Drug use despite knowing that it causing physical and psychological problems.

Progression of Drug use: Bell Curve

- Urgency of first use
- Relief use
- Feelings of guilt
- Increase in tolerance
- Onset of blackouts
- Grandiose/aggressive behavior
- Increase dependency
- Efforts to control use fail
- Family and friends avoided
- Decrease in ability to stop use
- Persistent remorse
- Onset of Lengthy intoxications
- Loss of interests
- Moral deterioration
- Work & Money problems
- Impaired thinking
- Unreasonable resentments
- Using w/inferiors
- Unable to initiate action
- Physical deterioration
- Obsession w/using
- All alibis exhausted
- Obsessive use continues.
Stages of Change:

- **Pre-contemplation**: Not considering change.
- **Contemplation**: Thinking about change.
- **Preparation**: Ready to change, planning.
- **Action**: Taking action
- **Maintenance**: Ongoing work, support.

Gary Zukav (Seat of the Soul)

The personality resists acknowledging addictions because that forces it to choose to leave part of itself out of control, or do something about it. Once an addiction has been acknowledged, it cannot be ignored, and it cannot be released without changing your life, your self-image, and your entire perceptual and conceptual framework.
Ambivalence / Discrepancy

- Increase client’s experience between what they are currently experiencing and what they would like to experience.
- Using vision of the future to enhance motivation.
- Self motivation or “Change Talk”.
- Explore specifics of daily life.
- Explore values & goals.
- Explore how things used to be, or how they would like them to be, in the future.

Negotiating Behavioral Change

- Respect choices.
- Take into account one’s readiness to change.
- Understand ambivalence (having mixed feelings) is common/natural.
- Allow the individual to target their behaviors, that they want to change.
- Stay neutral, provide information & support.
- Assist them in being an active decision maker.

Screening Principles

- Coming from a place of: Empathy, compassion, encouraging, non-judgmental (attributes of a favorite teacher or coach).
- Use of simple non-offensive language
- Use of open ended questions
- Discussion of family, social life, coping skills
- Discuss history of Trauma / Accidents
Screening and Assessment Recommendations for Older Adults

- Ask direct questions about concerns
  - Preface question with link to medical conditions of health concerns
  - Do not use stigmatizing terms (i.e. drug addict)

Special Assessments

- Cognitive Impairments
  - Dementia
    - Orientation/Memory/Concentration Test
  - Delirium
    - Confusion Assessment Method (CAM)
  - Other cognitive impairments
    - Trauma from falls, MVA, accident

Recovery Progression: Bell Curve

- Honest desire for help
- Learn addiction is an illness
- Told addiction can be arrested
- Stop drinking/using
- Meets normal & happy former alcoholics/addicts
- Takes stock of self
- Regular nourishment taken
- Right thinking begins
- Spiritual needs examined
- Onset of new hope
- Start of group therapy
- Appreciate possibilities of new life
- Family & Friends appreciate efforts.
- Diminished fears
- New circle of stable friends
- Return of self-esteem
- Increase of Emotional control
- New interests ideas
- Care of self
- Appreciation of real values
- Contentment in sobriety
The End: Thank You