

Abuse of Prescription and Over-the-Counter Drugs

Tedra Anderson-Brown, MD
tab91927@aol.com
Brad Wilson, MSN, FNP-C
bwilson@brchs.com
December 7, 2010

GOALS

This presentation will provide:

- General review of Substance Use Facts in adolescents including epidemiology data and pattern of use trends
- Focused review of Over-the-Counter (OTC) drugs and prescription medications abused by adolescents
- Education about warning signs and specific clinical presentations indicative of substance use
- Overview of best practice recommendations for assessment and treatment of adolescent substance use

Unfortunate Facts

- Teen SA is often unrecognized and undertreated
- Most parents fail to talk about OTC & Rx drugs
- Most MDs fail to screen for these drugs





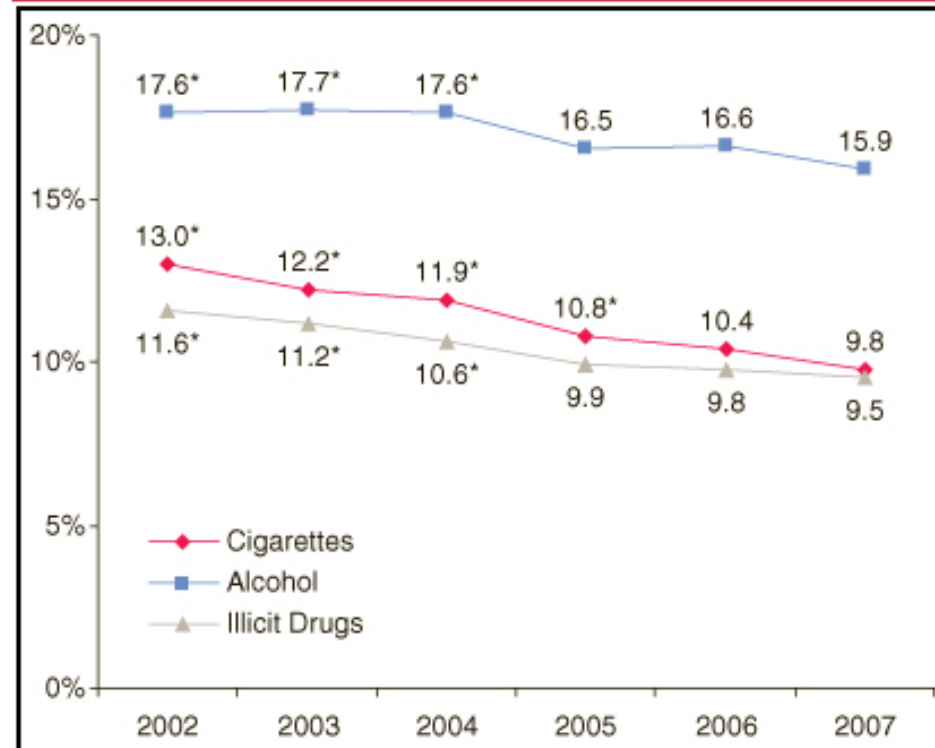
SPECTRUM of USE

Experimentation *vs.* Misuse *vs.* Abuse *vs.* Dependence

EPIDEMIOLOGY

- There was very little change in “past month” use of cigarettes, alcohol, and illicit drugs among adolescents between 2006 and 2007, the rates generally declined between 2002 and 2007.
- The decline in past month illicit drug use can be attributed primarily to a decline in marijuana use—the illicit drug most commonly used—with 8.2 percent of adolescents using marijuana in 2002 compared with 6.7 percent in 2007. The two other most commonly used illicit drugs among adolescents are inhalants and the nonmedical use of prescription-type drugs.
- Use of inhalants remained stable, while nonmedical use of prescription-type drugs declined from 4.0 to 3.3 percent over the 6-year period covered.

Figure 1. Percentages of Adolescents Using Cigarettes, Alcohol, or Illicit Drugs in the Past Month: 2002 to 2007



EPIDEMIOLOGY

- Substance Use or Dependence
 - In 2007 among adolescents aged 12-17, 7.7% of adolescents were classified¹ as substance dependent or abusive.
 - 4.3% of adolescents were classified as substance dependent or abusive for illicit drugs in 2007.
 - 5.4% of adolescents were classified as substance dependent or abusive for alcohol in 2007.
- Substance Use Treatment
 - In 2007, 7.6% of adolescents aged 12 to 17 who were in need of treatment received substance abuse treatment services.

Past Year Substance Dependence or Abuse for Specific Substances among Adolescents Aged 12-17¹

- Marijuana and hashish: 3.1⁰%
- Nonmedical use of psychotherapeutics²: 1.3⁰%
- Pain relievers: 0.9⁰%
- Hallucinogens: 0.5⁰%
- Cocaine: 0.4⁰%
- Inhalants: 0.4⁰%
- Stimulants: 0.3⁰%
- Tranquilizers: 0.2⁰%
- Sedatives: 0.1⁰%
- Heroin: 0.0⁰%

Trends/Patterns of Use from Monitoring the Future Survey

- Positive Findings
 - Between 2004 and 2009, a drop in past-year use of methamphetamine was reported for all grades (8th, 10th, 12th) and lifetime use dropped significantly among 8th graders, from 2.3 percent to 1.6 percent.
 - Among 10th and 12th graders, 5 year declines were reported for past-year use of amphetamines and cocaine.
 - Among 12th graders, past-year use of cocaine decreased from 4.4 percent to 3.4 percent.
 - In 2009, 12th graders reported declines in use of hallucinogens such as LSD.

Trends/Patterns of Use from Monitoring the Future Survey

- Areas of Concern
 - Marijuana use across the three grades studied has shown a stalled trend.
 - Past year use was reported by 11.8 percent of 8th graders, 26.7 percent of 10th graders, and 32.8% percent of 12th graders
 - Past-year nonmedical use of Vicodin and OxyContin increased during the last 5 years among 10th graders and remained unchanged among 8th and 12th graders
 - Nearly 1 out of 10 high school seniors reported non-medical use of Vicodin
 - Nearly 1 out of 20 high school seniors reported abuse of OxyContin
 - When asked how prescription narcotics were obtained for non-medical use, about 52 percent of 12th graders said they were given the drugs or bought them from a friend or relative.
 - Additionally, 30 percent reported receiving a prescription for them.

Trends/Patterns of Use from Monitoring the Future Survey

- Misuse of *over-the-counter cough & cold medicines, most of which contain dextromethorphan*, was first measured in 2006
- DXM misuse has declined a bit in 8th and 12th grades since then, but not in 10th grade. (4%, 5%, and 7% of 8th, 10th, and 12th grade students, respectively)

Why these Trends?

- Availability/Easy Access
- Misperception of SAFETY
- Low Cost/FREE
- Legal
- Attitudes
- Technology
- Marketing



Reasons Teens Use?

- Experimentation
- Sleep
- Peer Pressure/"fit in"
- Improve focus, concentration
- Pain relief
- Others

Over-the-Counter Drug Abuse

- Dextromethorphan (DXM)
 - Also known as: Triple C's, Skittles, Vitamin D, and Robo
 - Abusers usually ingest 250 to 1500 milligrams in a single dosage.
 - Effects on the Brain:
 - confusion, inappropriate laughter, agitation, paranoia, hallucinations and other sensory changes, including the feeling of floating and changes in hearing and touch.
 - Abusers of DXM describe the following four dose-dependent "plateaus:"
 - 1st 100–200 Mild stimulation
 - 2nd 200–400 Euphoria and hallucinations
 - 3rd 300– 600 Distorted visual perceptions Loss of motor coordination
 - 4th 500-1500 Out-of-body sensations
 - Long-term use can result in severe psychological dependence.

Over-the-Counter Drug Abuse

- K2 (Synthetic Cannabis)
 - Also known as: Bilss, Black Mamba, Bombay Blue, Fake Weed, Genie, Spice, Zohai
 - Marketed as incense and usually sold in bags resembling potpourri. Usually smoked.
 - Effects on the Brain:
 - similar to those of marijuana and include paranoia, panic attacks, and giddiness.
 - Now illegal in NC.

Prescription Drug Abuse

- Narcotics/Opioids
(examples: Vicodin/Oxycontin/Oxycodone)
- Street names: Hillbilly Heroin (Oxycodone); Oxycotten(OxyContin); Watson387 (Vicodin)
- Usually taken orally, snorted, injected
- Effects on brain:
 - Overall sense of calm, lethargy, inability to concentrate
- Long-term use produces physical/psychological dependence.
- Street values:
 - Vicodin 5/500= \$2-4/ tab
 - OxyContin 40mg= \$25-40/tab

Prescription Drug Abuse

- Benzodiazepines (examples: Xanax, Valium, Klonopin)
- Street Names: Z-bars (Xanax); V's (Valium); Tranks/Downers (class name)
- Abusers usually crush then snort or inject medications
- Effects on the Brain
 - Low/Moderate doses: lethargy, drowsiness, slurred speech, confusion, depression
 - High doses: Euphoria, aggression, rapid mood swings
- Tolerance usually develops in those who have used for 6 months or longer. Causes psychological/physical dependence.
- Street Value:
 - Xanax 0.5mg= \$1/tab
 - Valium 10mg= \$1-2/tab

Prescription Drug Abuse

- Amphetamines (examples: Adderall, Ritalin)
- Street Names: Beans/Pep Pills/Double Trouble (Adderall); Rids/Pineapples/Rball (Ritalin)
- Abusers usually take orally or crush then inject.
- Effects on the brain:
 - Heightened sense of well-being, euphoria, increased activity, release of social inhibitions
- Long term effects: psychosis, malnutrition, repetitive muscle tremors
- Street value
 - Adderall 30mg= \$3-30 depending on number bought
 - Ritalin 10mg= \$2-10/ tab

Consequences of Teen SA

- School Problems
- Risky Sexual Behavior
- Developmental Delays
- Ongoing Dependence
- Crime/Delinquency

Consequences of Teen SA

- MVA
- ED Visits
- Medical Problems
- Psychiatric Issues
- Suicide



General Warning Signs of Use

- Personality Changes, Aggression
- Loss of Interest in Usual Activities
- Poor Performance at School or Work
- Change in friends



General Warning Signs of Use

- Poor Hygiene
- Increasingly Secretive
- Empty Pill bottles or Missing Meds
- Late Nights on Computer

SPECIFIC SIGNS/SX OF OPIOID USE

- Intoxication

euphoria, impaired judgment, poor coordination, dizziness, nausea, panic attacks, miosis, respiratory depression, lowered BP/HR, psychosis, other
Overdose-coma, death

- Withdrawal

anorexia, anxiety, cravings, HA, fatigue, mydriasis, lacrimation, piloerection, rhinorrhea, yawning, sweats, abd cramps, mm spasms, diarrhea, emesis, chills, mm & bone aches, elevated BP/HR, hot/cold flashes, fever, insomnia

SPECIFIC SIGNS/SX OF BZD USE

- Intoxication

disinhibition, elevated mood, decreased anxiety, occ lability, unsteady gait, poor coordination, slurred speech, memory loss, amnesia, horizontal gaze nystagmus, poor judgment

OD common w/ ETOH, opioids

- Withdrawal

short vs long acting agent

anxiety, tremors, nystagmus, insomnia, anorexia, N/V,

Orthostatic hypotension, sz, delirium

SPECIFIC SIGNS/SX OF STIMULANT USE

- Intoxication

euphoria, anger, irritability, grandiosity, excessive talking, hyperactive, increased sex drive, increased confidence, paranoia, psychosis, elevated BP/HR, wt loss, anorexia, aggression

- Withdrawal/”CRASH”

intense dysphoria, cravings, irritability, fatigue, SI

STRATEGIES to EFFECT CHANGE

- Prevention and Early Intervention are KEY



STRATEGIES to EFFECT CHANGE

Prevention

- Prescription Drug Regulations & Monitoring
- Pharmacy Regulations
- Drug Abuse Resistance Educ
D.A.R.E.
- Drug Education via Public Service Announcements

CRITICAL ELEMENTS of TREATMENT

- Appropriate Screening
- Comprehensive Assessment
- Integrated Tx Approach



CRITICAL ELEMENTS of TREATMENT

- Continuum of Care
- Family Involvement
- Developmentally Appropriate
- Others

BEST PRACTICE GUIDELINE

Practice Parameter for the Assessment and Treatment of Children and Adolescents With Substance Use Disorders

*Source: Journal of the American Academy of Child and Adolescent Psychiatry,
44:6, June 2005*

SCREENING TOOLS

- CRAFFT Questionnaire
brief, reliable
- PESQ (Personal Experience Screening Questionnaire)
- SASSI (Substance Abuse Subtle Screening Inventory)
- POSIT (Problem-Oriented Screening Instrument for Teenagers)
- DUSI-R (Drug Use Screening Inventory-Revised)

CRAFFT QUESTIONNAIRE

C- Have you ever been in a CAR driven by someone (including yourself) who was “high” or had been using alcohol or drugs?

R-Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?

A-Do you ever use alcohol or drugs while you are ALONE?

F-Do you ever FORGET things you did while using alcohol or drugs?

F-Do your family or FRIENDS ever tell you that you should cut down on your drinking or drug use?

T-Have you gotten into TROUBLE while you were using alcohol or drugs?

ASSESSMENT INSTRUMENTS

- T-ASI (Teen Addiction Severity Index)
- ADAD (Adolescent Drug Abuse Diagnosis)
- PEI (Personal Experience Inventory)
- ASAM PPC-2R

SUCCESSFUL/EFFECTIVE TX

FOCUS on....

- ENGAGEMENT
- RETENTION
- AFTERCARE



SPECIAL CONSIDERATIONS

- Ethnicity/Culture
- Gender/Sexual Orientation
- Dual Dx/Co-existing disorders
- Developmental Stages

PSYCHOSOCIAL TX STRATEGIES

- MST-Multisystemic Therapy
- FFT-Functional Family Therapy
- MDFT-Multidimensional Family Therapy
- Bx Tx-Behavioral Therapy
- CBT-Cognitive Behavioral Therapy

PSYCHOSOCIAL TX STRATEGIES

- MI/MET-Motivational Interviewing & Motivational Enhancement Therapy
- 12 Step Minnesota Model
- CMR-Contingency Management Reinforcement
- ACRA-Adolescent Community Reinforcement Approach
- Integrative Models of Tx

PHARMACOLOGIC INTERVENTIONS

- very little data on efficacy
- case reports, small open label trials
- “generalized” adult data

Examples: Antabuse, Naltrexone, Campral,
OMT, Suboxone, detox regimens,
SSRI's & other meds for co-morbid dx



AFTERCARE

Assertive aftercare is a critical component of SA tx

- Decreases relapse
- Decreases # using/drinking days
- Decreases heavy use
- Decreases SI
- Increases “readiness to change”

QUESTIONS/ANSWERS



References

- ACAP (2005) “Practice Parameter for the Assessment and Treatment of Children and Adolescents With Substance Use Disorders”. *Journal of the American Academy of Child and Adolescent Psychiatry*. 44:6
- NIH (2007). “Monitoring the Future”.
<http://drugabuse.gov/drugpages/MTF.html>
- SAMSHA (2007). “National Survey on Drug Use and Health”. US. DHHS <http://oas.samhsa.gov/nhsda.htm>
- “Getting the Facts About Adolescent SA & Tx”.
<http://www.athealth.com/Consumer/adolescentsufacts.html>
- Herper, M (2010). “America's Most Popular Drugs”. *Forbes Magazine*. <http://www.forbes.com/2010/05/11/narcotic-painkiller-vicodin-business-healthcare-popular-drugs.html>