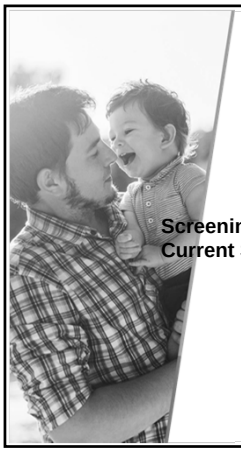


Screening of Substance Use Disorders: Current Strategies and Challenges

Enrique B. Olivares, MD, FAPA, DABAM
Director of Addiction Services
Beacon Health Options Maryland

Objective

- To identify proper screening tools and strategies for the most common substance abuse disorders".

2

The cost of drug use to US society

$6,120
per second

Estimated cost of drug use to the U.S society in lost productivity, health care costs, etc. *(Source: NDIC)*

3

ALCOHOL

1) 10-20 % of patients in a primary care office have and Alcohol-related SUD
2) Up to 50% of patients admitted to a trauma center or seen in the ED have an Alcohol-related SUD
3) In hospital and primary care settings, 5-10% of patients have an illicit substance or prescription-drug SUD
4) Problems related to Alcohol SUD: tobacco dependence, hypertension, obesity, glucose intolerance, memory loss, liver damage, etc.

4

Drinking Levels

- **Drinking Levels Defined**

Moderate alcohol consumption:

- According to the Dietary Guidelines for Americans, moderate drinking is up to 1 drink per day for women and up to 2 drinks per day for men.

- **Binge Drinking:**

- NIAAA defines binge drinking as a pattern of drinking that brings blood alcohol concentration (BAC) levels to 0.08 g/dL. This typically occurs after 4 drinks for women and 5 drinks for men—in about 2 hours.

5

Drinking Levels II

- SAMHSA defines binge drinking as drinking 5 or more alcoholic drinks on the same occasion on at least 1 day in the past 30 days.

Heavy Drinking:

- SAMHSA defines heavy drinking as drinking 5 or more drinks on the same occasion on each of 5 or more days in the past 30 days.

6

The CAGE Questionnaire for Alcohol Use

Have you ever felt you ought to cut down on your drinking or drug use?

Do you get annoyed at criticism of your drinking or drug use?

Do you ever feel Guilty about your drinking or drug use?

Do you ever take an Early-morning drink (eye-opener) or use drugs first thing in the Morning ("a little hair of the dog that bit you") to get the day started or eliminate the "shakes"?

If you answer "yes," "sometimes," or "often" to 2 or more of the questions, you may have a problem with alcohol. If you think you or someone you care about has an alcohol use problem talk with a health professional.

7

Screening, Brief Intervention and Referral to Treatment

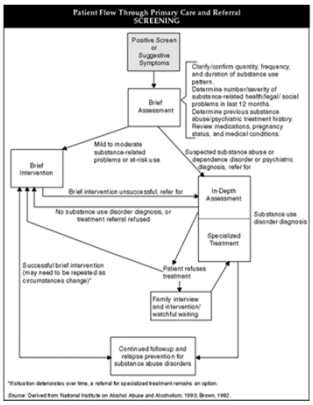
- 1) Brief Intervention (BI) is one of many methods used to help patients with excessive alcohol and/or drug use disorders
- 2) BI is a time-limited, client-centered counseling session designed to reduce substance use
- 3) Delivered by a health care professional during the course of routine clinical care
- 4) Average duration is 5-20 minutes
- 5) Multiple sessions more effective than one
- 6) Having an established relationship with the patient increases the likelihood of success
- 7) Works in many stages of change

8

SBIRT

- Universal routine SBI recommended to reduce misuse of alcohol by adults and pregnant women
- Can be used for tobacco use disorders
- No universal screening recommended for illicit drug use as the efficacy of this intervention has not been validated
- Not enough evidence of efficacy in children and adolescents
- Intervention recommended by NIAAA, NIDA, SAMHSA, NQF (National Quality Forum)
- NQF recommends screening of all patient ages 10 and older for alcohol and tobacco related SUDs

9



10

Breathalyzer

11

Breathalyzer II

- Initial testing devices for alcohol designed in the 40's
- In 1954 Dr. Robert Borkenstein developed the Breathalyzer, in which a chemical reaction turns into a change in color
- Breathalyzer infers the BAC (blood alcohol concentration) from a sample of expired air
- The ratio of alcohol in expired air versus blood is 2,100:1
- This means that the alcohol contained in 2.1 liters of expired air contains the same amount of alcohol as 1 ml of blood
- Alcohol intoxication level: 0.08 g/dL (0.08 grams of alcohol per 100 ml of blood)

12

Recommendations for Use of Breathalyzer and Other Testing Devices

- Testing during visits
- Random Breathalyzer readings
- Other testing devices:
- Intoxilyzer: use of infrared spectroscopy
- Alcosensor III-IV: use of fuel cell
- Interlock: device installed in cars for alcohol monitoring
- SCRAM: continuous alcohol measuring (skin detector)

13

Screening for SUDs in Pregnant Women

- All pregnant women should evaluated for alcohol, tobacco, illegal drugs and prescription drug use
- Patients screening positive for an assessment should be referred for a comprehensive evaluation
- The 4Ps (Parents, Partners, Past and Pregnancy) has been validated for pregnant women
- In a 2010 NIH study of 2,684 pregnant women, the 30-day prevalence of alcohol and drug abuse was:
- 6% for alcohol
- 6% for cannabis
- 1% for cocaine
- 1% for sedatives
- 1% for heroin
- Clinicians must balance potential legal consequences vs. principles of beneficence and autonomy of mothers and their children

14

Screening of Pregnant Women- the 4 Ps

This screening device is often used as a way to begin discussion about drug and alcohol use. Any woman who answers yes to one or more questions should be referred for further assessment.

1. Have you ever used drugs or alcohol during this Pregnancy? a) Yes b) No
2. 2 Have you had a problem with drugs or alcohol in the Past? a) Yes b) No
3. 3 Does your Partner have a problem with drugs or alcohol? a) Yes b) No
4. 4 Do you consider one of your Parents to be an addict or alcoholic? a) Yes b) No

15

The T-ACE

- Developed by Dr. R. J. Sokol
- 4-item questionnaire based on the CAGE
- Reflects a pattern of use
- Validated in diverse patient samples
  - Detroit, MI and Boston, MA
  - Self-administered format in Boston

16

T-ACE Questions

- **T** How many drinks does it take to make you feel high (effects)?
- **A** Have people ever annoyed you by criticizing your drinking?
- **C** Have you ever felt you ought to cut down on your drinking?
- **E** Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hang-over?

17

Screening for Alcoholism and other Drugs of Abuse in the Elderly

- Alcoholism affects 6-11% of older persons admitted to hospitals
- 60% of men and 30% of women report a decrease in alcohol use after the age of 65.
- Alcoholism is the third most frequent cause of psychiatric impairment among the elderly
- As many as three fourths of alcoholics admitted to the hospital are not diagnosed
- Older patients are very sensitive to the term “alcoholics”, and respond better to the concept that their drinking is affecting their health
- Older alcoholics are classified as late onset if they present beyond the age of 65

18

Rates of Alcoholism in the Elderly

- 10% of cases in geriatric mental health outreach program
- 11% of older male admissions to psychiatric facilities
- 15% of older patients presenting to a psychiatrist
- 18% of general medical/surgical hospitalized elderly
- 30% of all calls for alcohol information from persons aged 55
- 40-60% in a Midwestern United States nursing home

19

OPIOIDS- The Opium Dens

- Opium dens scattered across the Wild West by the mid 1800s
- Brought in by Chinese immigrants coming to work on railroads
- In the mid 1800s opium was a very popular drug
- Wild Bill Hickock and Kit Carson frequented opium dens more often than saloons
- At that time alcoholism was a bigger problem
- Opium was promoted as a cure of alcoholism in the late 1800s

20

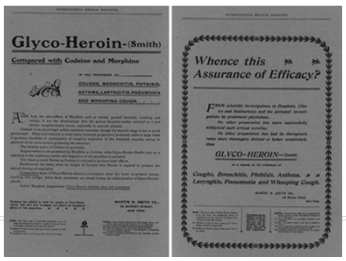
Opium Dens in the Mid 1800s

21

The History of Heroin

- Heroin was developed in 1874 in Germany
- Imported to the US shortly after
- Branded as “safe and non-addictive” alternative to morphine
- Drug kits including morphine, heroin and cocaine became available
- Laudanum (opium in alcohol base) became widely available
- Sold unregulated until 1920 (Congress)
- In 1925 there were 200,000 heroin addicts in the US

22



The Vietnam War

- Before the 60s, only jazz musicians and people from the slums used heroin
- GIs in Vietnam got used to heroin, and brought some home to make some money
- This became an epidemic in New York City
- Methadone was developed to fight this epidemic
- In the 1990s doctors emphasized more effective pain management
- Newer and more potent drugs became available

25

Pain Management in the 90s

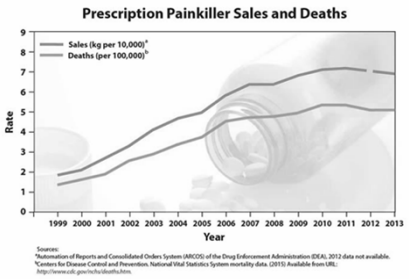
- Patients became addicted and turned to illicit drug markets
- Pill mills in Florida (90s)
- In 2010 drug companies, under pressure, reformulated their products
- This resulted in more people with addictions turning to heroin
- In 2012 the CDC reported that every day approximately 100 people died of opioid overdoses

26

New Medications for Pain Management (90s)

27

Prescription Painkillers Sales and Deaths



28

Epidemiology of Chronic Pain

- Most common pain disorders are low back pain (27%), severe headache or migraine (15%), neck pain (15%) and facial pain (4%).
- Costs for the most part associated to impaired function and loss of productivity, as well as increased healthcare utilization
- Limited follow up studies on chronic pain
- Approximately 35-40% of US residents suffer of chronic pain
- The prevalence of disability is approximately 10% of chronic pain patients
- Most common types of pain associated to headaches, abdominal pain, neck/lower back, hip/knee, shoulder, hand/wrist, ankle/foot

29

Epidemiology of Chronic Pain II

- More common in females (also pain-related disability)
- Lower prevalence in Asian population
- Inversely correlated with education and income
- Risk factors associated to stress levels, depression, anxiety, higher BMI
- Cost to society: $ 560-635 billion annually (in 2010 dollars)
- 50-75% patients die in moderate to severe pain

30

Impact of Pain on Quality of Life

- 59% report an impact on their overall enjoyment of life
- 77% report feeling depressed
- 70% say they have trouble concentrating
- 74% report decreased energy
- 88% report sleeping problems

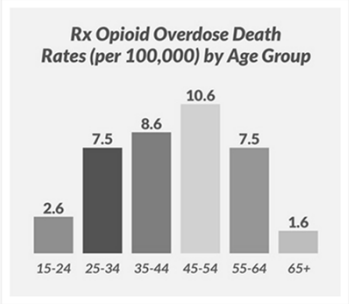
31

Prescription Drug Abuse in the US

- Prescription drugs second-most abused drugs after MJ
- Among 12th graders, six of the 10th most used substances
- Major contributor to drug overdoses: in 2013 there were 43,982 deaths by overdose in the US. Of these, 51.8% were related to prescription drugs
- Of deaths related to prescription drug overdoses, 70% were related to prescription painkillers and 30% to benzodiazepines
- The risk of death by prescription drug overdose is higher for Non-Hispanic Whites, followed by Native Americans or Pacific Islanders, African-Americans and Hispanics.

32

Opioid Overdose Deaths by Age Group (CDC, 2013)



33

Screening of Addiction in Patients with Chronic Pain

- Indicators of addiction:
- a) Adverse consequences associated with the use of opioids
- b) Loss of control over the use of opioids
- c) Preoccupation with the use of opioids even in the
- presence of appropriate analgesia

34

Drug-Seeking Behaviors

- Obtain medication from multiple providers
- Repeated episodes of prescription loss
- Multiple requests for early refills
- Pseudo-addiction: seeking alternative medications when there is no proper pain relief
- Therapeutic dependence: efforts aimed to prevent recurrence of pain or withdrawal symptoms

35

Addiction and Pain Management

- 3-19% of chronic pain patients suffer from addiction
- The lifetime prevalence of addiction in chronic pain patients is 6.1-16.7%
- There are no differences in the rates of addiction related to gender, racial background or marital status

36

Most Frequent Responses Endorsed by Addicts

- Patient believes he/she is an addict
- Physician believes patient is an addict
- Family believe patient is an addict
- Patient has multiple prescription providers
- Patient increases analgesic dose/frequency
- Patient uses analgesics for other reasons
- Patient visits the ED to obtain analgesics
- Patient takes analgesics from family members
- Patient has a history of addiction
- Patient has had opioid detoxification

37

Most Predictive Indicators of Addiction

- Patient believes he/she is an addict
- Patient uses increased analgesic dose/frequency
- Route od administration preference
- The use of these 3 risk factors identify 92.9% of patients with addictions (predictive value)
- 67% of patients in a small sample of 52 patients had psychiatric co-morbidities
- 31% of patients had histories of physical and sexual abuse

38

Previous History of Addiction

- 27% of patients with previous histories of addition are able to use prescription opiates in a non-abusive manner
- 60% of patients who had previous histories of addiction and had drug treatment are able to use opioid medication in a non-abusive manner

39

Heroin

- Derives from the juice of poppy plants grown in Southeast Asia, Pakistan, Mexico and Colombia
- The opium extracted from poppy becomes opium, then morphine and finally heroin
- Yearly production across the world is approx. 400 tons
- Most of the heroin on the East Coast comes from Europe
- The US consumes 40% of the world's heroin production
- Mexican and Colombian heroin is being distributed to Miami, Texas and the Pacific Coast

40

Heroin Use in the US

- 1996 National Household Survey on Drug Abuse:
- 2.4 million lifetime users
- 216,000 used the preceding month
- 141,000 users in 1995
- Increased trend in heroin use since 1992
- The use among 12-17 increased 4X from 1980-1995
- Most new users are female, middle income with access to private insurance
- 14% ED visits are related to heroin

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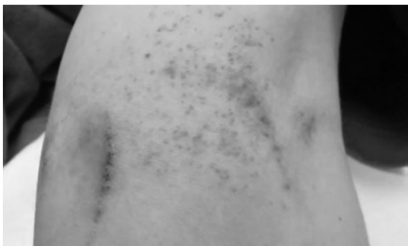
Needle Marks IV Drug Users



43

Needle Marks IV Drug Users

44

Risk Factors for Heroin Use

- Family History of Addiction
- Being male
- Having another mental heath disorder
- Peer pressure
- Lack of family involvement
- Anxiety, depression and loneliness

45

Protective Factors

- Self-Control
- Parental Monitoring
- Academic Competence
- Anti-Drug Use Policies
- Strong Neighborhood Attachment

46

Screening for Prescription Opioid Misuse

- Most studies focuses on survey-based screening of aberrant , drug-related behaviors and toxicology screens
- Aberrant behaviors strongly associated with drug dependence
- Many treatment contracts for the prescription of opioid medications for chronic pain patients incorporate elements related to minimization or stopping alcohol and/or illicit drug use and obtaining these medications from other physicians

47

Non Medical Use of Prescription Medications

- Most abuse drugs: stimulants, sedative-hypnotics, sedative-anxiolytics and opioid analgesic medications
- Occurs in all age groups
- Often escapes medical attention in primary care offices, pain clinics and addiction treatment programs
- Definition of drug abuse by NIDA “any intentional use of a medication with intoxicating properties outside of a physician’s prescription for a bona fide medical condition, excluding accidental misuse”
- In 2006, 7 million people age 12 and older had used psychotherapeutic drugs non-medically, prescription drugs being the most frequently abused

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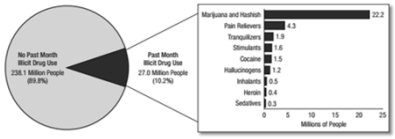
Past Month Illicit Drug Users Ages 12 and Older: 2014

Figure 1. Numbers of Past Month Illicit Drug Users among People Aged 12 or Older: 2014



Note: Estimated numbers of people refer to people aged 12 or older in the civilian, noninstitutionalized population in the United States. The numbers do not sum to the total population of the United States because the population for NSDUH does not include people aged 11 years old or younger, people with no fixed household address (e.g., homeless or transient people not in shelters), active-duty military personnel, and residents of institutional group quarters, such as correctional facilities, nursing homes, mental institutions, and long-term hospitals.
Note: The estimated numbers of current users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past month.

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Screening of Opioid SUD-Opioid Risk Tool

- Date _____
- Patient Name _____
- OPIOID RISK TOOL
- Mark each Item Score Item Score
- box that applies If Female If Male
- 1. Family History of Substance Abuse Alcohol [ ] 1 3
- Illegal Drugs [ ] 2 3
- Prescription Drugs [ ] 4 4
- 2. Personal History of Substance Abuse Alcohol [ ] 3 3
- Illegal Drugs [ ] 4 4
- Prescription Drugs [ ] 5 5
- 3. Age (Mark box if 16 – 45) [ ] 1 1
- 4. History of Preadolescent Sexual Abuse [ ] 3 0
- 5. Psychological Disease Attention Deficit [ ] 2 2
- Disorder,
- Obsessive Compulsive

50

Opioid Risk Tool (ORT) II

- Disorder,
- Bipolar,
- Schizophrenia
- Depression [ ] 1 1
- TOTAL _____ _____
- Total Score Risk Category
- Low Risk 0 – 3
- Moderate Risk 4 – 7
- High Risk > 8
- Reference: Webster LR. Predicting aberrant behaviors in opioid-treated patients: Preliminary validation of the opioid risk tool.
- Pain Medicine. 2005;6(6):432-442. Used with permission.

51

Opioid Risk Tool (ORT)

- The ORT has good c-values (concordance index) for females (0.85) and males (0.82)
- Good accuracy and validity, and good ability to pick up aberrant behavior among opioid users in pain management.
- Sensitivity is 99% and specificity is 16% (medium risk).
- For high risk scores sensitivity is 53% and specificity is 96%
- Instrument better suited for primary care practices

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Drug Abuse Survey Screening Test (DAST)_

- 10 and 20-item screening instrument
- Original 28-item scale modeled from MAST (Michigan Alcohol Screening Test)
- High internal consistency for DAST 28-item alpha=0.92, DAST 20-item alpha=0.95
- Highly correlated with ASI (Addiction Severity Index)
- DAST-28 sensitivity 96% with cut off score 6 or 7
- DAST-10 and DAST-20 have good internal consistency for patients with psychiatric co-morbidities (internal consistency alpha>0.85 and temporal stability with r > 0.70

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DAST Limitations

- Areas of social and occupational impairment doe not apply to people who stay or work at home
- Few women would answer questions about violence
- Arrest and illegal activities would be relevant to female users
- No questions related to children or home duties

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DAST-20

Test Date: _____

Score: _____

Preliminary Comments
Adapted from language provided by Dr. Harvey Skinner (January 5, 2009)

The following questions concern your potential involvement with drugs other than alcohol. When you answer the questions, remember that the term "drug abuse" does not include alcohol. Instead, it refers to your use of prescribed or over-the-counter drugs in excess of the recommended dosage. For example, if you were given a prescription for pain killers, but took more than you were supposed to, this would be included. The phrase "drug abuse" also includes any nonmedical use of any of the following drugs. This includes substances like marijuana, valium, cocaine, amphetamines, LSD, and heroin. Remember that the term "drug abuse" does not include alcohol. If you have difficulty with a statement, then choose the response that is mostly right.

Do you understand?

Question
These questions refer to the past 12 months. **Circle the Response**

1.	Have you used drugs other than those required for medical reasons?	Yes No
2.	Have you abused prescription drugs?	Yes No
3.	Do you abuse more than one drug at a time?	Yes No
4.	Can you get through the week without using drugs?	Yes No
5.	Are you always able to stop using drugs when you want to?	Yes No
6.	Have you had "blackouts" or "flashbacks" as a result of drug use?	Yes No
7.	Do you ever feel bad or guilty about your drug use?	Yes No
8.	Does your spouse (or parents) ever complain about your involvement with drugs?	Yes No
9.	Has drug abuse created problems between you and your spouse or your parents?	Yes No
10.	Have you lost friends because of your use of drugs?	Yes No
11.	Have you neglected your family because of your use of drugs?	Yes No
12.	Have you been in trouble at work (or school) because of drug abuse?	Yes No
13.	Have you lost jobs because of drug use?	Yes No
14.	Have you gotten into fights when under the influence of drugs?	Yes No
15.	Have you engaged in illegal activities in order to obtain drugs?	Yes No
16.	Have you been arrested for possession of illegal drugs?	Yes No
17.	Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes No
18.	Have you had medical problems as a result of your drug use? (e.g. memory loss, hepatitis, convulsions, bleeding, etc.)	Yes No
19.	Have you gone to anyone for help for a drug problem?	Yes No
20.	Have you been involved in a treatment program specifically related to drug use?	Yes No

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Scoring of DAST-20

Scoring the DAST-20

Adopted or excerpted from materials provided by Dr. Harvey Skinner (January 5, 2009)

Scoring The DAST-20

Score 1 point for each question answered "yes," except for Questions 4 and 5, for which a "no" receives 1 point.

DAST-20 Interpretation Guide

Score	Severity	Intervention Recommended
0	N/A	N/A
1 – 5	Low	Brief Intervention
6-10	Intermediate (likely meets DSM criteria)	Outpatient (Intensive)
11-15	Substantial	Intensive
16-20	Severe	Intensive

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Screener and Opioid Assessment for Pain Patients (SOAPP)

The following are some questions given to all patients at the Pain Management Center who are on or being considered for opioids for their pain. Please answer each question as honestly as possible. This information is for our records and will remain confidential. Your answers alone will not determine your treatment. Thank you.

Please answer the questions below using the following scale:

0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often, 4 = Very Often

1. How often do you have mood swings?	0 1 2 3 4
2. How often do you smoke a cigarette within an hour after you wake up?	0 1 2 3 4
3. How often have any of your family members, including parents and grandparents, had a problem with alcohol or drugs?	0 1 2 3 4
4. How often have any of your close friends had a problem with alcohol or drugs?	0 1 2 3 4
5. How often have others suggested that you have a drug or alcohol problem?	0 1 2 3 4
6. How often have you attended an AA or NA meeting?	0 1 2 3 4
7. How often have you taken medication other than the way that it was prescribed?	0 1 2 3 4
8. How often have you been treated for an alcohol or drug problem?	0 1 2 3 4
9. How often have your medications been lost or stolen?	0 1 2 3 4
10. How often have others expressed concern over your use of medication?	0 1 2 3 4

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SOAPP (Cont.)

0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often, 4 = Very Often

11. How often have you felt a craving for medication?	0 1 2 3 4
12. How often have you been asked to give a urine screen for substance abuse?	0 1 2 3 4
13. How often have you used illegal drugs (for example, marijuana, cocaine, etc.) in the past five years?	0 1 2 3 4
14. How often, in your lifetime, have you had legal problems or been arrested?	0 1 2 3 4

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SOAPP

- Responses based on a 5-point Likert scale
- Range 0-56 points
- With a 7 as a cut off score, sensitivity of 91% and specificity of 69%, positive predictive value 71% and negative predictive value of 90% to predict aberrant drug behavior
- With a cut off of 7 increases sensitivity, but may increase false positive for low specificity at this cut off

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Additional Resources for Screening Tools

- For an electronic version of the SOAPP, click here: http://www.painedu.org/soapp.asp.
  For an electronic version of the ORT, click here: http://www.opioidrisk.com/node/884.

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Aberrant Drug Behavior

- Adverse consequences/harm from use
- Intoxicated/somnolent/sedated
- Declining activity
- Irritable/anxious/labile mood
- Increasing sleep disturbance
- Increasing pain complaints
- Increasing relationship dysfunction
- Impaired control over use/compulsive use
- Reports lost/stolen prescriptions or medications
- Frequent early renewal requests

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Aberrant Drug Behavior II

- Urgent calls or unscheduled visits
- Abusing other drugs/alcohol
- Cannot produce medications on request
- Withdrawal noted at clinic visits
- Observers report overuse or sporadic use
- Preoccupation with use because of craving
- Frequent misses appointments unless for opioid renewals
- Does not try non-opioid treatments
- Cannot tolerate most medications
- Request medications with high reward
- No relief with anything except opioids

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Guidelines for Urine Drug Testing in Treatment of SUDs

- An individual must have a SUD diagnosis contained in DSM-V
- The labs ordered are within the scope of practice of the practitioner requesting them
- An screening urine immunoassay (IA) is generally sufficient for ongoing drug monitoring
- A rapid urine test (5-10-12 drug urine cup) and Breathalyzer is recommended at the beginning of SUD care
- During treatment, more frequent random urine testing is recommended for the first 2 months in treatment, and then monthly, not to exceed 18 tests in any 6-month period

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Types of Urine Drug Monitoring

Table 1. Types of Urine Drug Monitoring

Urine Drug Screening (UDS)	Urine Drug Testing (UDT)
Immunoassay screen	GC-MS or LC-MS/MS
In-office, point-of-care or lab-based test	Laboratory, highly specific and sensitive
Results within minutes	Results in hours or days
Detects drug classes and a few medications, illicit substances	Measures concentrations of all medications, illicit substances and metabolites
Guidance for preliminary treatment decisions	Definitive identification and analysis
Cross-reactivity common: more false positives	False-positive results rare
Higher cutoff levels: more false negatives	False-negative results rare

GC-MS, gas chromatography–mass spectrometry; **LC-MS/MS,** liquid chromatography–tandem mass spectrometry

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Drug Detection Times in Urine

Length of Time Drugs of Abuse Can Be Detected in UrineDrug	Time
Alcohol	7-12 h
Amphetamine	48 h
Methamphetamine	48 h
Barbiturate	
Short-acting (eg, pentobarbital)	24 h
Long-acting (eg, phenobarbitol)	3 wk
Benzodiazepine	
Short-acting (eg, lorazepam)	3 d
Long-acting (eg, diazepam)	30 d
Cocaine metabolites	2-4 d
Marijuana	
Single use	3 d
Moderate use (4 times/wk)	5-7 d
Daily use	10-15 d
Long-term heavy smoker	30 d
Opioids	
Codeine	48 h
Heroin (detected as morphine)	48 h
Hydromorphone	2-4 d
Methadone	3 d
Morphine	48-72 h
Oxycodone	2-4 d
Propoxyphene	6-48 h
Phencyclidine	8 d

-- Mayo Clinic Proc. 2008; 83(1)66-76

- Sometimes the specific drug ingested is not detected, but instead one of its metabolites is found.

65

Validity Testing of a Urine Specimen

Table 2. Validity Testing of a Urine Specimen[15-16]

Urine specimen is reported as:	When:
Diluted	Creatinine concentration ≥2 mg/dL but <20 mg/dL, and specific gravity >1.001 but <1.003
Substituted	Creatinine concentration <2 mg/dL and specific gravity ≤1.001 or ≥1.020
Adulterated	pH <3 or ≥11; nitrite concentration ≥500 Qg/mL; chromium (VI) concentration ≥50 Qg/mL; presence of a halogen (eg, from bleach, iodine, fluoride), glutaraldehyde, pyridine, or surfactant

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Possible False Positive Results

Table 3. **Possible False-Positive Results**[13]

Substance Ingested	Possible False Result
Poppy seeds	Opiates
Quinolones (antibiotics)	Opiates
Quetiapine (antipsychotic)	Methadone
Trazodone (antidepressant)	Fentanyl
Venlafaxine (antidepressant)	Phencyclidine
Clobenzorex (diet pill)	Amphetamine
Fenproporex (diet pill)	Amphetamine
Promethazine (for allergies, agitation, nausea, and vomiting)	Amphetamine
l-methamphetamine OTC nasal inhaler	Amphetamine

OTC, over the counter

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Laboratory Testing in SUDs

- Qualitative Testing is recommended when:
- 1) IA testing does not correlate with the patient's clinical condition
- 2) Patient reports drug use and the testing is negative, or vice versa
- 3) To differentiate use of heroin in the context of legitimate and ongoing pain management

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Questions?

Thanks!

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