Drug Testing 101

Presented by Jeff Kovalik
President of On-Site Testing Specialists

Understanding the Problem

- 8.7% of full-time workers admitted past month heavy alcohol use.¹
- 8.6% of full-time workers admitted past month illicit drug use.²
- 70% of the estimated 14.8 million Americans who use illegal drugs are employed.³
- 14% increase in drug test positive rate over past 10 years.⁴

1. SAMHSA Short Report April 16, 2015; “heavy” alcohol use = 5 or more drinks in any one event. Mining and construction had highest use. There were approximately 120 million workers during that time period.
2. SAMHSA Short Report April 16, 2015; Accommodations & Food Service with highest use at 19.1%.
More Numbers (as of May 2017)

- **2.6 billion**: The number of drugs ordered or provided Physician Offices in the US.
- **48.7%**: Number of individuals using at least one prescription drug in the past 30 days.
- **21.8%**: Number of individuals using 3 or more prescription drugs in the past 30 days.
- **100 million**: Americans with chronic pain (1/3 US population).
- **55% to 85%**: of injured workers receive narcotics for chronic pain relief.
- **$630 billion**: Cost of missed work days and medical costs.

29 States Currently Authorizing Medical Marijuana Use

- AK
- FL
- MI
- NM
- AR
- HI
- MN
- NY
- AZ
- IL
- MT
- OH
- CA
- LA
- ND
- OR
- CO
- ME
- NV
- PA
- RI
- CT
- NH
- DE
- MA
- NJ
- VT
- WA
- WA D.C.
8 states have authorized personal use of marijuana for those aged 21.

- **Per Se Intoxication Laws**
  - Beginning in 1990 states began passing “per se” intoxication laws. In the following 19 states any trace amount of an illicit drug is considered presumptive intoxication:
    - AZ, KY, OH, WI
    - DE, MI, PA
    - GA, MN, RI
    - IL, MS, UT
    - IN, NV, VA
    - IA, NC, WA

- Six states have passed per se “threshold” laws. These laws vary somewhat but the states and their presumptive intoxicated levels are:
  - CO (5ng/mL), NV (2ng/mL), PA (1ng/mL)
  - MT (5ng/mL), OH (2ng/mL), WA (5ng/mL)
DANGER.....DANGER....

• Research indicates that 10-20% of the nation’s workers who die on the job test positive for alcohol or other drugs.

• Approximately 70% of illegal drug users are employed.

(US Department of Labor, online January 2016)
Synthetic Cannabis (Spice or K2)

- Synthetic cannabis is a psychoactive designer drug derived of natural herbs sprayed with synthetic chemicals that, when consumed, allegedly mimic the effects of cannabis.
- Often sold as “herbal incense” or “herbal smoking blends.” Every package will be labeled unfit for human consumption.
- In the US, as of March 1, 2011, this product was listed as a Schedule I controlled substance.
Synthetic Cannabis Examples

“Bath Salts”

The white crystals resemble legal bathing products like epsom salts. They contain Mephedrone and MDPV (Methylenedioxypyrovalerone). These are stimulants that act much like Methamphetamine and Cocaine, but produce the added effect of hallucinations.
Marijuana

Effects

Behavioral
Short-term Memory Loss
Lethargy
Speech slowed
Visual Distortion = Accidents
Depth Perception = Accidents
Paranoia
Severe Anxiety
Raid Vending Machines and Lunch Boxes in Refrigerator

Eyes:
- Reddening
- Decreased intra-ocular pressure

Mouth:
- Dryness

Skin:
- Sensation of heat or cold

Heart:
- Increased heart rate

Muscles:
- Relaxation
Vapes (E-Cigs, Wax/Herb Vapes)

The latest versions of e-cigarettes contain a battery-powered heating element that vaporizes a liquid containing nicotine. Vape pens for pot use the same mechanism, but the devices are optimized to vaporize the active molecules in concentrated marijuana oils, not nicotine. And just as with e-cigs, there's no fire, smoke, or tell-tale smell.

Cocaine/Crack
Symptoms of Cocaine Use

* Dilated pupils
* Belligerent Attitudes
* Rapid Speech
* Increased sweating
* Inability to sit still – very restless
* Runny Nose / Sniffing

Amphetamine and Methamphetamine

* Paranoia
* Anxiety
* Continual Talking
* Dry Skin
* Acne

PREScriptions - Adderall, Ritalin, VyVanse, Concerta, Focain, Desoxyn
ILLICIT - Crystal Meth, Ice, Crank, (Past known as Black Beauties, Uppers
Prescription Pills

Benzodiazepines

- Referred to as “benzos”, they are broadly prescribed for problems with anxiety, stress, panic attacks, or sleep

- Is the 2nd most common prescription in the US

- Commonly abused with opiates

- Valium, Xanax, Klonopin, Librium

- In low dosages, these drugs are sedatives. In moderate dosages, they counter anxiety. In high doses they are hypnotics. Those abusing benzos will develop a tolerance for them and will get to extremely high dosages

- Withdrawal syndrome similar to alcohol - possibility of death
Opioids

- Oxycontin, Percocet, Roxicet, Oxycodone
- Vicodin, Hydrocodone
- Fentanyl
- Methadone, Suboxone, Subutex
- Opana, Oxymorphone

Heroin
Symptoms of Opioid Abuse

• “Nodding off” or falling asleep at inappropriate times, feeling loaded

• Scratching face or nose continuously

• Sedations may be unapparent--opioids can make some people feel mildly stimulated

• Mydriasis: pinpoint pupils

So what if you got drunk last night

<table>
<thead>
<tr>
<th>Time</th>
<th>Blood/Alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00 a.m.</td>
<td>.25</td>
</tr>
<tr>
<td>3:00 a.m.</td>
<td>.23</td>
</tr>
<tr>
<td>4:00 a.m.</td>
<td>.22</td>
</tr>
<tr>
<td>5:00 a.m.</td>
<td>.20</td>
</tr>
<tr>
<td>6:00 a.m.</td>
<td>.19</td>
</tr>
<tr>
<td>7:00 a.m.</td>
<td>.17</td>
</tr>
<tr>
<td>8:00 a.m.</td>
<td>.16</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>.14</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>.13</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>.11</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>.10</td>
</tr>
</tbody>
</table>
Alcohol

- The most abused substance in the world
- Commonly abused with illicit drugs
- Highly addictive
- Withdrawal syndrome is incredibly dangerous

Alcohol Abuse

**Short Term**
- Bloodshot Eyes
- Dry Mouth
- Slurred Speech
- Mood Swings / Change in Attitude

**Long Term**
- Hair Loss
- Sleep Disturbances
- Depression / Social Withdrawal
Observable Behaviors

• Smell of alcohol or strong odor of mouthwash
• Staggering/unsteady gait
• Pupil Changes
• Deterioration in physical appearance
• Crying spells
• Accidents

Observable Behavior

• Sleeping on the job
• Nodding off
• Lethargy/depressed
• Slurred, rambling, or pressured speech
• Confusion
• Belligerent or combative attitude
• Mood swings
Gasoline, Spray Paint, Airplane Glue, Whip Cream

Aerosols
Solvents

PCP – Angel Dust
Ecstasy – The Love Drug

LSD - Acid
Testing Methodologies

Urine
Oral Fluid
Hair
Sweat

URINE

• Laboratory
  – Correct chain of custody required
  – Results in 24-48 hours
  – Quantitative results

• Rapid Drug Screen
  – Chain of custody recommended
  – Results in minutes
  – Negative or Non-negative result
Detection Time - Urine

- Hard Drugs
  - 3 to 4 days
- Marijuana
  - Up to 90 days depending on use

Oral Fluids

- Laboratory
  - Chain of custody required
  - Results in 24-72 hours
  - May get quantitative result
- Rapid Drug Screen
  - Recommend chain of custody
  - Results in 5 minutes
  - Negative or Non-negative result
Detection Time – Oral Fluid

- Hard Drugs
  - 3 days
- Marijuana
  - 12 – 18 hours from ingestion

Hair

- Laboratory
  - Chain of custody required
  - Collection process must be followed
  - Can test body hair
Detection Time - Hair

- 90 days for ALL drugs

Sweat Patch

- Laboratory test only
- Chain of custody required
- Must be properly administered and removed
- Can be worn for up to 14 days
- Results in 24-72 hours
Detection Time - Sweat

• Will only detect drugs of abuse ingested while patch is on the body.

Urine Adulteration

• Achilles’ heel of drug testing
• A growing problem
  – 10-20% of submitted urine samples are adulterated
• Some products self destruct after 5 hours to avoid detection
• With adulterant testing, you can be sure your negative results are truly negative
• Preliminary guidelines for adulteration tests have been established by the Department of Transportation
Urine Abused Drug Detection Times and Cut offs (ng/dl)

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Window of Detection in Urine*</th>
<th>Initial Screen ng/dl</th>
<th>Confirmation ng/dl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>2 days-3 weeks</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>Cocaine</td>
<td>2-3 days</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Opiates</td>
<td>2-3 days</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>2-3 days</td>
<td>1000</td>
<td>250</td>
</tr>
<tr>
<td>PCP</td>
<td>8 days-3 weeks</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>2-3 days</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>3 or more days</td>
<td>300</td>
<td>300</td>
</tr>
</tbody>
</table>

Making A Positive Drug Test Negative

- Commonly used methods:
  - Adulteration
    - Adding foreign chemicals to urine
  - Substitution
    - Substituting negative urine
      - Friend’s, purchase, synthetic or other species
  - Dilution
    - Drink excessive amount of water and/or other fluid prior to testing
      - Especially 2 hours before
Adulteration Strategies

• Modifying drug molecules so they are not recognized by specific antibodies
• Interfering with immunoassay procedure
• Interfering with confirmatory process
  – Example: Nitrite affects THC (marijuana) and causes false negative confirmation

Urine Adulteration Products

• Household products
  – Ammonia, Vinegar, Dishwashing soaps, Salt, Bleach, Drano etc.
• Commercial Adulteration
  – Chemicals instantly change positive urine drug test results to negative ones
  – Simple to acquire
    • Available from “Headshops” and vitamin stores
    • Mail order from “High Times” magazine
    • Internet
Examples of Household Adulteration Products

Examples of Commercial Adulteration Products
An Example of Substituted Products

Adulterants
Simple to Buy in Local Stores!
Buy over the Internet

Branan Medical Corporation
Intect®7 Urine Adulteration Strip
Adulteration Test Products
Intect®7 Adulterant Test Strip

• 7-parameter test strip
• Tests for
  – Creatinine
  – Nitrites
  – Glutaraldehyde
  – pH
  – Specific Gravity
  – Bleach
  – Pyridinium chlorochromate

Intect®7 Interpretation

• Creatinine
  – Normal constituent of urine
  – Interpret with specific gravity
    • Dilution: <20 mg/dl (specific gravity <1.003)
    • Substitution ≤5 mg/dl (specific gravity ≤1.001; ≥1.020)
  – If dilution seems to be an issue, take 2nd specimen. No drinking allowed for minimum of 2 hours prior to result.
• Nitrite
  – Must be >50mg/dl for adulteration
  – May also affect bleach pad (color change to gray turquoise)
• Glutaraldehyde
  – Pad color must be brown
  – Other clinical indications: pad changes from pink to dark purple
Intect®7 Interpretation

• pH
  – Adulterated Urine:
    • Abnormal Low: ≤3
    • Abnormal High: ≥11

• Specific Gravity
  – Must be read with creatinine level
  – Urine normal range: 1.001 to 1.035

• Bleach
  – Oxidizing agent
  – Color is based on urine, equipment may not detect

• Pyridinium Chlorochromate
  – More sensitive oxidizing pad
  – Color based on urine: low value to 0.1%

Effects of Adulterants on Intect®7

• Masking agents are fast in and fast out
  – Within 5 minutes, they can be detected
  – They become undetectable in within 1 day

• By the time the sample reaches the laboratory, the adulterant may be gone
  – False negative results may be generated
How many illicit substance users were there in the U.S. in 2014?

D) 27 million

Approximately 10% of any given workforce abuses drugs

As of December 2014, what is the most commonly abused substance?

**Alcohol**

Costs to Healthcare and the U.S.

**Healthcare**

- Alcohol - $25 billion
- Illicit Drugs - $11 billion

**U.S. Economy**

- Alcohol - $224 billion
- Illicit Drugs - $193 billion

= $14,364.54 every second

As of December 2017, what is the most commonly abused illicit substance?

**Marijuana**

TRUE or FALSE: The average return on investment for an effective drug-testing program is 100 times its cost.

True


What is the best tool for defining “reasonable suspicion” and reducing supervisor bias in a reasonable suspicion case?

Reasonable Suspicion Checklist

According to Quest Diagnostics’ annual drug testing index, which of the following drug tests generates the highest positivity rates?

**Reasonable Suspicion**

27.7 %

Pre-employment ranks 6th out of the 7 primary tests

4.0 %


22.7 million people needed D&A treatment in 2013, only 2.5 million received treatment

*That’s only 11%!*

The earlier treatment is received, the better the prognosis for a full recovery
Before we get started....
What’s going on with Post-Incident Testing?

OSHA’s new record-keeping rule does not expressly prohibit post-incident drug testing

It does, however, prohibit blanket post-incident drug testing that discourages employee reporting whereby substance use was not likely to have been the cause.

How does this affect you?

Post-incident drug testing is still permitted under the requirements of worker’s compensation laws and DOT regulations.

For every other post-incident case, you must now rely solely on reasonable suspicion!
Operationalizing “Reasonable Suspicion”

The greatest problem with reasonable suspicion testing is the **vagueness** in defining what circumstances warrant a drug test.
An objective, unbiased approach to spotting illicit drug use in the workplace, where a person trained to spot certain signs would reasonably conclude that an employee is impaired by a specific substance.

SIGNS of impairment must be ...

* Specific
* Contemporaneous
* Articulable
SIGNS of impairment must be ...

* Specific...

Attributable to predictable SIGNS of a specific drug or class of drugs.

SIGNS of impairment must be ...

* Contemporaneous...

Occurring right now.
SIGNS of impairment must be …

* Articulable…

Expressed in spoken or written form; beyond gut feelings.

Objective Physical “SIGNS”

- Dilated or constricted pupils
- Smell of alcohol
- Smell of marijuana
- Runny nose, constant sniffing
- Bloodshot, watery eyes
- “Track marks” on the body
- Frequent itching, scabbing
- Excessive sweating
Objective Behavioral “SIGNS”

- Unusual behavior in their office / break room
- Extreme drowsiness or nodding off
- Slurred, rambling, pressured speech
- Confusion or memory problems
- Belligerent, combative attitude
- Sharp mood swings
- Unsteady gait, poor balance
- Unusual appearance
- Hyperactivity or euphoria

When documenting...

Remember the acronym... "SIGNS"

- See
- Impairment
- Gather Facts
- Never Accuse
- Send for testing
A **reasonable suspicion checklist** is the best tool for defining "reasonable suspicion" in YOUR workplace and reducing supervisor bias in reasonable suspicion cases.

**Reasonable Suspicion Checklist**
Reasonable Suspicion Checklist

<table>
<thead>
<tr>
<th>Employer's Name:</th>
<th>Employee's ID #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Title:</td>
<td></td>
</tr>
<tr>
<td>Location of Incident:</td>
<td>Date:</td>
</tr>
<tr>
<td>Trained Supervisor’s Name &amp; Signature:</td>
<td>Timed Observed:</td>
</tr>
<tr>
<td>Witnessing Supervisor’s Name &amp; Signature:</td>
<td></td>
</tr>
</tbody>
</table>

Observations by Trained Supervisor (Check all that apply; provide brief descriptions of any changes in behavior)

**Appearance:**
- [ ] Normal
- [ ] Tremors/ Twitches
- [ ] Flushed or Pale
- [ ] Dilated Pupils
- [ ] Sleepy
- [ ] Swollen/ Puncture Marks
- [ ] Heavy Eyelids
- [ ] Bloodshot eyes
- [ ] Disheveled
- [ ] Excessive Sweating
- [ ] Cleanliness
- [ ] Other (explain below)

**Behavior/ Demeanor:**
- [ ] Nervous
- [ ] Erratic
- [ ] Mood Swings
- [ ] Lethargic
- [ ] Irritable
- [ ] Paranoid
- [ ] Verbally/Physically Abusive
- [ ] Highly Excited
- [ ] Confusion/Inattentive
- [ ] Combative
- [ ] Fatigue/ Sleeping/ Downswing
- [ ] Other (explain below)

**Motor Skills:**
- [ ] Normal
- [ ] Stumbling
- [ ] Falling
- [ ] Unbalanced
- [ ] Other (explain below)
- [ ] Dizziness
- [ ] Lack of Coordination
- [ ] Fogginess
- [ ] Stumbling

**Speech:**
- [ ] Normal
- [ ] Slurred
- [ ] Loud
- [ ] Other (explain below)
- [ ] Incoherent
- [ ] Exaggerated
- [ ] Talking Excessively

**Odor:**
- [ ] Normal
- [ ] Smell of Alcohol
- [ ] Excessive Cologne
- [ ] Body Odor
- [ ] Smell of Marijuana
- [ ] Other (explain below)

**Test Conducted:**
- [ ] Yes
- [ ] No

Additional Comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Measuring Behavioral “SIGNS” through **Job Performance**

Has the employee...

* had any safety issues?
* been calling off a lot lately?
* been frequently tardy or absent?
* reported personal financial issues?
* been performing below expected numbers?

**RECAP: Handling On-the-Job Impairment**

Ask yourself...

“**Would I feel comfortable with this employee working alongside me and their co-workers?**”

If the answer is “No” and is supported with observable, specific, and articulable SIGNS, you have reasonable suspicion for impairment.
“But they’re my most productive employee!”…

Top 10 Causes for Non-Reporting…

- Afraid of mislabeling an employee
- Projecting own use
- Concerned it will ‘turn ugly’
- Don’t have enough time
- Lack competency / proper training
- The employee is their friend
- The employee is too nice
- The employee is productive
- One’s business is their own
- Company will not support decision
Afraid of mislabeling an employee...

Remember the “N” in SIGNS: **Never accuse**.

Stick to the facts, and let the employee know what the facts are.
Concerned it will turn ugly...

Sometimes unavoidable, but remember... they are likely angry because they’re caught.

You are armed with the facts. Stick to them.

Don’t have enough time...

Reasonable suspicion cases are not on our to-do-lists.

Failure to respond only compounds the problem and could cost a life.
Lack competency / proper training...

Primarily the burden of leadership to ensure gaps are filled.

Seek knowledge yourself. Comfort follows competency.

The employee is a friend...

Friends don’t let friends drive drunk. Safety is paramount.

Few people give thanks during a reasonable suspicion case. The “thank you” will come later.
The employee is too nice...

Not every user will experience mood swings or attitude changes.

Some users are the most happy, because they get to use their favorite drug while getting paid.

The employee is too productive...

Not every user will suffer a change in productivity.

Some users are even more productive, because they get to use their favorite drug while getting paid.
One’s business is their own...

Certain rights are given up when a person reports to work.

Employee and customer safety is more important than hurting someone’s feelings.

✔ Uphold the mission and core values of your company
✔ Know your drug and alcohol policy inside and out, take action
✔ Be prepared to explain your D&A policy to your employees
✔ Embrace your role in your company’s drug-free workplace program

IMPORTANT!!!

If you don’t know your policy, your employees won’t care to follow it.
Handling the Confrontation:

The angry, crying, and overly polite employee
The Crying Employee
Test Your Knowledge

* What does the acronym “SIGNS” stand for?

See
Impairment
Gather facts
Never accuse
Send for testing
Mix and Match

- Highest Positivity Rates
- Reasonable Suspicion filter question
- #1 abused drug in America
- Reasons for non-reporting
- Must substantiate before referral
- Handling the employee confrontation
- Best tool for defining Reasonable Suspicion

- Checklist
- Hearsay evidence
- Stick to facts, don’t accuse
- Alcohol
- Safety of staff & patients
- Personal barriers
- Reasonable Suspicion tests

Greenbriar Treatment Center