Experiencing déjà vu? A “Groundhog Day” approach to Impaired Driving is not the Answer

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Professional

Washington State Patrol

Traffic Safety Commission

Foundation for Advancing Alcohol Responsibility

National Alliance to Stop Impaired Driving
Partners & Collaboration
Corporate Sponsors
<table>
<thead>
<tr>
<th></th>
<th>DRUGGED DRIVING</th>
<th>DRUNK DRIVING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number:</strong></td>
<td>Hundreds of drugs</td>
<td>Alcohol is alcohol</td>
</tr>
<tr>
<td><strong>Use by Driver, Presence in Crashes:</strong></td>
<td>Limited Data</td>
<td>Abundant Data</td>
</tr>
<tr>
<td><strong>Use by Drivers:</strong></td>
<td>Increasing</td>
<td>Decreasing (at time of survey)</td>
</tr>
<tr>
<td><strong>Impairment:</strong></td>
<td>Varies by type</td>
<td>Well-documented</td>
</tr>
<tr>
<td><strong>Beliefs &amp; Attitudes:</strong></td>
<td>No strong attitudes/public indifferent</td>
<td>Socially unacceptable</td>
</tr>
</tbody>
</table>

NHTSA National roadside survey: ~1-4 drivers tested positive for drugs 22.4% daytime weekday drivers and 22.5% weekend nighttime drivers (20% increase from 2007).

Percentage of drivers with cannabis in their system increased 50% (8.6% in 2007 to 12.6% in 2013-14).
What does Impairment look like in your state?
IMPAIRED DRIVING

- High-Risk Impaired Driving
- Multiple substance impaired driving
- State grants with GHSA and Sheriffs
- DUI training guides
- CLE credit online prosecutor course
- Screening and assessment tools
- Ignition interlocks for all DUI offenders and other policy countermeasures

https://www.responsibility.org/toolkit
• 50.5% of fatally injured drug-positive drivers (with known drug test results) were positive for two or more drugs and 40.7% were found to have alcohol in their system (NHTSA FARS as cited in Hedlund, 2018)

• Preliminary data from the National Highway Traffic Safety Administration (NHTSA) shows the steepest rise in total traffic deaths since 2007, with a 7 percent increase in 2020 due to impaired driving, speeding, not wearing a seatbelt, and other risky driving behaviors.

• Police-reported alcohol-involved fatalities jumped by 9 percent, and trauma center data from NHTSA shows an increase in serious injuries and deaths involving drivers at high blood alcohol concentration levels and multiple drug combinations. This 9 percent increase does not include drugged driving fatality crashes; therefore, the impaired driving data is underreported, and is one area we need to improve to clearly understand the scope of this problem.

• Among drug-positive drivers killed in crashes, 4% tested positive for both marijuana and opioids, 16% for opioids only, 38% for marijuana only, and 42% for other drugs (Governors Highway Safety Association, 2017)
DUID testing is difficult and complex. There are 430 specific drugs or metabolites in the national highway safety fatality database.

Source: Fatality Analysis Reporting System (FARS)
# Drug Categories and Their Common Effects

<table>
<thead>
<tr>
<th>CNS DEPRESSANTS</th>
<th>CNS STIMULANTS</th>
<th>HALLUCINOGENS</th>
<th>DISASSOCIATIVE ANESTHETICS</th>
<th>NARCOTIC ANALGESICS</th>
<th>INHALANTS</th>
<th>CANNABIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol, Valium, Prozac, Xanax, Soma, Rohypnol (roofies), GHB</td>
<td>Cocaine, Crack, Methamphetamine, Adderall, Ritalin, Dextedrine, MDPV (bath salts)</td>
<td>LSD (acid), MDMA (ecstasy), Peyote, Psilocybin, mushrooms</td>
<td>PCP, Ketamine, DXM (cough medicine)</td>
<td>Heroin, Hydrocodone, Vicodin, Morphine, Oxycodone, Percodan, Methadone</td>
<td>Solvents (gasoline, paint thinner, cleaning fluid, model glue), Aerosols (spray cans), Anesthetic gases (chloroform, whipped cream spray cans, nitrous oxide)</td>
<td>Marijuana, Hash, Hash oil, Marinol, Dronabinol, K2, Spice</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMON EXAMPLES</th>
<th>PUPIL SIZE</th>
<th>REACTION TO LIGHT</th>
<th>BODY TEMPERATURE</th>
<th>MUSCLE TONE</th>
<th>OTHER INDICATORS (users will not typically show all indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal</td>
<td>Slow</td>
<td>Normal</td>
<td>Flaccid</td>
<td>Pupil size: Normal, Reaction to light: Slow, Body temperature: Normal, Muscle tone: Flaccid. Other indicators: euphoria, depression, laughing/crying for no reason, reduced ability to divide attention, disoriented, sluggushy, thick, slurred speech, drunk-like behavior, droopy eyes, fumbling, relaxed inhibitions, slowed reflexes, uncoordinated, drowsy.</td>
</tr>
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| POLY DRUG USE | The use of two or more drugs of different categories will cause the body to display a combination of effects. This is because each drug works independently. The results of poly drug use may be unpredictable but will generally show some indicators of each drug used. Alcohol and cannabis are the most common mixers with other drugs. |

A project of the Northwest Washington Target Zero Coalition - thensedsme.com

RESPONSIBILITY.ORG
Multi-substance impaired driving enforcement

DUI is the \textit{ONLY} crime where the investigation stops after obtaining a minimum amount of evidence.

- Current protocols prevent drug testing once a suspect registers an illegal BAC.
- Implications:
  - Hinders the ability to measure the true magnitude of the drug-impaired driving problem.
  - Many DUI arrests are inaccurately attributed to alcohol alone.

\begin{center}
\begin{tikzpicture}
\begin{axis}[
    title={Number of Drivers in Fatal Crashes in Washington State Under the Influence of Alcohol and/or Drugs},
    xlabel={Year},
    ylabel={Number of Drivers},
    xtick=data,
    ytick={0,40,80,120,160,200},
    yticklabels={0,40,80,120,160,200},
    legend pos=north east
]
\addplot+[mark=x] coordinates {
};
\addplot+[mark=*] coordinates {
};
\addplot+[mark=triangle] coordinates {
};
\legend{POLYDrug (Drug Positive for two or more drugs OR any alcohol and drugs), BAC=0 ONLY, ONE Drug Only (Drug Positive for one drug OR Alcohol less than .08)}
\end{axis}
\end{tikzpicture}
\end{center}
Responsibility.org Position Statements

Oral Fluid Screening for Impaired Drivers

InCREASES in drug and multi-substance impaired driving call for expanded drug testing on the road. For officers who are not specially trained in drug-impaired driving detection, oral fluid screening can aid in identifying drivers that may have recently consumed drugs who would otherwise escape detection.

How oral fluid field screening works. Oral fluid screening detects recent drug use but does not detect impairment. It is collected and analyzed in under 10 minutes, which is important as drug levels dissipate quickly while impairment remains. Oral fluid screening devices typically include an oral fluid collection system consisting of a collection device and test cartridge and an analyzer. Law enforcement officers obtain samples using the collection device and insert them into the analyzer which determines drug presence by an indicator reading of the test strip.

Oral fluid test devices are specific for drugs in drug classes that community appear impaired driven (pernicious tetrahydrocannabinol (THC)), cocaine, methamphetamine, amphetamine, opiates, and benzodiazepines. A positive result indicates recent drug use when alongside the officer's evaluation of impairment, can set in detecting recent consumption of drugs (e.g., several days or weeks prior to arrest).

Oral fluid screening devices are preliminary screening tests that can be used to establish probable cause in consideration with other evidence. At the time of testing, the officer has concluded that a driver is impaired using standard field sobriety tests. The oral fluid test then identifies what drug classes (if any) likely caused the observed impairment. The devices indicate drug presence above established cut-off levels. They do not detect quantifiable drug levels and are not admissible in court as evidence. Only a confirmation sample analyzed in a forensic laboratory, such as a blood test or a secondary oral fluid sample, can be used for evidentiary purposes.

Oral fluid screening device performance is variable and depends on the quality of the instrumentation. Therefore, agencies must be careful when determining which instruments to deploy in the field. Pilot testing is one option available to assess the overall accuracy of devices and obtain officer feedback about performance and usability. The Society of Forensic Toxicologists (SOT) offers guidelines for establishing oral fluid pilots.

Oral fluid screening offers the following advantages:

- Identifies recent drug use (within 24 hours);
- Easy, fast, gender-neutral collectors that are minimally invasive;
- No-wax required to collect samples;
- Minimized accuracy, specificity, and sensitivity;
- Results may support search warrant requests for additional chemical samples;
- Quick identification of both drug and multi-substance impaired drivers (including those with a BAC above 0.08);
- Admissible in court hearing (e.g., probable cause);

Increase Drug Testing in Impaired Driving Cases

As more drivers are tested for drugs, it has become apparent that many alcohol-impaired drivers are actually multi-substance impaired drivers who avoid detection (see WA vs CD in Orange, 2016, and Bul & Reed. 2016). Driving under the influence is the only crime where the investigation stops after minimal evidence is obtained due to standard operating procedure. If a law enforcement officer observes impairment and detects a blood alcohol concentration (BAC) above the legal limit, the investigation typically ends, saving time and money. Many laboratories possess drug testing for 5-6 drugs in 30-100% of the cases. In decades, testing for additional drugs, allowing drivers impaired by multiple substances to avoid accountability. If drug use is not identified, cannot be monitored or treated and multi-substance impaired driving, which goes a much higher crash risk, remains significantly underreported. Every impaired driving investigation—whether it involves alcohol, drugs, or both—is a race against the clock.

When DUI cases involve drugs, time delays are significant, and the most compelling evidence (i.e., drug levels in the blood) dissolves quickly. In most states, blood tests confirm driver presence in a DUI suspect's system. However, due to delays in obtaining blood, drug test results often do not reflect drug concentration levels at the time of driving an account of rapid metabolism. When a suspect refuses to voluntarily submit to a breath test or a blood draw, a warrant must be obtained. Additionally, in most jurisdictions, an on-site healthcare professional must perform the blood draw in a medical facility. This process can add up to two additional hours, possibly more in rural areas. Figuring against the time of evidence, officers must efficiently collect blood or other chemical samples that are then analyzed to confirm drug presence in full cases. Harer strategies on being a growing number of jurisdictions to increase the efficiency of this process.

- Electronic warrant systems (e-warrants) that facilitate timely blood sample collection in DUI cases when people refuse to voluntarily submit to testing;
- Law enforcement prioritization programs that reduce time required to obtain a blood sample and mitigating against other issues;
- Oral fluid drug testing for DUI suspects, regardless of BAC level, to identify drug presence at roadside and determine the need for a blood draw;
- Building laboratory capacity to ensure toxicology labs can handle testing elements, are adequately staffed, and are advancing technology.

Electronic warrant systems (e-warrants) help officers quickly obtain a search warrant for blood to accurately determine BAC or toxicology results and streamlines the arrest process. Other benefits of e-warrants include reduced workflow, fewer errors, shorter DUI cases, quicker results, fewer backlogs on the system, reduced referral rates, and public perceptions. Minnesota’s e-Charging platform reduced error rates from 30% to nearly zero and practitioners report increased ease in obtaining warrants. With an e-warrant system, submissions can be prepared in under 10 minutes and the review, approval, and return process can be completed in 25-30 minutes. Implementation recommendations and examples of robust systems can be found in our Guide to Implementing Electronic Warrants, with the International Association of Chiefs of Police (IACP)

Multi-substance Impaired Driving

Multi-substance impaired driving is the operation of a motor vehicle while impaired by drugs and alcohol or a combination of drugs. Research has conclusively shown that drugs used in combination or with alcohol produce greater impairment than substances used on their own (Eckman et al., 2009; Remaner et al., 2014; Schiavone et al., 2013). In describing this increased level of impairment, the analogy of 2+2 is often used to convey the higher risk associated with using multiple substances at the same time. This multiplicative impairment effect poses a higher crash risk on our roadways.

Research & Data Highlights:

- In 2018, 50.5% of fatally injured drug-positive drivers (with known drug test results) were positive for two or more drugs, and 40% were found to have alcohol in their system (NHTSA, 2018).
- The Driving under the Influence of Drugs, Alcohol and Medications (DUID) project of the European Commission found that individuals who drive under the influence of alcohol and drugs were twice as likely to crash compared to those who drive under the influence of alcohol alone (Schiavone et al., 2012; O’Farrell, 2014).
- Washington State data revealed that multi-substance impairment was the most common type of impairment found among drivers involved in fatal crashes between 2008 and 2016. Among drivers involved in fatal crashes, during this timeframe, 44% tested positive for two or more substances with alcohol and Tetrahydrocannabinol (THC) being the most common combination (Eckman et al., 2018).
- The National Survey on Drug Use and Health (NSDUH) revealed that of the 28.3 million individuals age 18 and over who had a substance use disorder in 2018, 12.9% (3.5 million) struggled with the use of both illicit drugs and alcohol (SAMHSA, 2019).

Current Detection Challenges:

Multi-substance impaired driving is underestimated. Most law enforcement officers are trained to identify alcohol-impaired drivers, but unfortunately, many do not receive specialized training to identify the signs and symptoms of drug impairment (e.g., Enhanced Roadside Impaired Driving Enforcement (ARIDE) training or Drug Recognition Expert certification).
Inhaling - Pulmonary

- Smoking
- Vaporizing
- Dabbing

Oral - Digestive

- Edibles
- Capsules
- Raw Cannabis
Trans mucosal – sublingual, intranasal, rectal, ocular

- **Tincture**
- **Lozenges**
- **Spray - oral/nasal**
- **Suppository**
- **Transdermal**
Synthetic Cannabinoids
K2
Spice
AK47
Bliss
Black Mamba
Fake Weed
Bombay Blue
Genie
Zohai
Red X
Potpourri
Demon
Black Magic
Ninja
Spike
Mr. Nice Guy
Yucatan
Synthetic Cannabinoids

• How is it consumed?
  – Smoked – Joint
  – Pipes
  – E-cigarettes
  – Vape
  – Drink as a Tea

• How does it affect the body?
  – Paranoia
  – Short Term Memory Loss
  – Nausea
  – Anxiety
  – Panic Attacks
  – Hallucination
  – Giddiness
  – Increase in heart rate and blood pressure
  – Convulsions
  – Organ Damage
  – Death
Bolstering DUID Detection

- Standardized Field Sobriety Test (SFST)
  - Horizontal Gaze Nystagmus
  - Walk and Turn
  - One-Leg Stand

- Advanced Roadside Impaired Driving Enforcement (ARIDE)
  - 16-hour (2 day) classroom instruction
  - How to observe, identify, and articulate signs of alcohol and/or drug impairment
  - Widely deployable - 13,832 trained in 2018

- Drug Enforcement Classification Program (DECP)
  - Trains Drug Recognition Experts (DREs)
  - 56-hour (8 day) classroom instruction + field certifications
  - Applies 12-step DRE evaluation protocol, offers expert opinion
  - Elite training: 1,613 trained in 2018

The 12-Step DRE Protocol
1. Breath Alcohol Test
2. Interview of Arresting Officer
3. Preliminary Examination and First Pulse
4. Eye Examination
5. Divided Attention Psychophysical Tests
6. Vital Signs and Second Pulse
7. Dark Room Examinations
8. Examination for Muscle Tone
9. Check for Injection Sites and Third Pulse
10. Subject’s Statements and Other Observations
11. Analysis and Opinion of Evaluator
12. Toxicological Examination

The 7 Drug Categories
1. CNS Depressants
2. CNS Stimulants
3. Hallucinogens
4. Dissociative Anesthetics
5. Narcotic Analgesics
6. Inhalants
7. Cannabis
Toolkit Contents

- Understanding the need for and importance of a law enforcement phlebotomy program
- Planning and implementing a phlebotomy program
- Training
- Addressing liability concerns
- Barriers and how to overcome them
- Costs
- Tips for implementing and sustaining a successful law enforcement phlebotomy program
- Additional resources

Roadside Strategies

- Electronic DUI packet
- Electronic Search Warrants
- Forensic Phlebotomy
- Lakewood PD/Pierce County
New Law Enforcement Tech Solutions

- E-Warrants
- Ocular Data Systems
- Oral fluid testing
- E-fingerprints
- Phlebotomy
Roadside Drug Testing: Internationally accepted and adopted

Argentina, Australia, Austria
Belgium, Brazil
Canada, Chile, Columbia
France
Germany
Ireland, Italy
Netherlands, New Zealand
Poland, Portugal,
South Africa, South Korea, Spain, Sweden
Turkey
UAE, UK (arrests up 600% since implementation)
Vietnam

Some devices:
www.responsibility.org/ewarrants
The National Alliance to Stop Impaired Driving
Mission

The National Alliance to Stop Impaired Driving (NASID) works to eliminate all forms of impaired driving, especially multiple substance impaired driving, through DUI system reform, DUI detection, data improvements and technology to effectively fight impaired driving. NASID is a broad coalition of stakeholders working in a public/private partnership to achieve these goals. We encourage collaboration between law enforcement, prosecutors, judges, toxicologists, academics, safety advocates, and industry to work together toward the goal of eliminating impaired driving.
Purpose

NASID provides national leadership to identifying and promoting solutions to impaired driving, including expanded chemical testing among impaired drivers, training for criminal justice practitioners, toxicology lab capacity, improvement and programs to increase the likelihood of recovery and reductions in recidivism. Our work includes state and federal advocacy efforts, public awareness and education, and state implementation of effective programs.
NASID Goals

Establish drug/multi-substance impaired driving as a top priority safety issue

Persuade the public and decision-makers to expand drug testing – screening/evidentiary

Explore and advocate for emerging technologies
  Ensure a greater public understanding of how it works, reliability, effectiveness
  Dispel myths regarding technology – oral fluid testing
  Promote pilot programs and replicate them in target states

Build champions for issue among elected officials and stakeholders

Convene influencers for State and Federal legislative action

Assist practitioners with training and education
Visual Concept
National Alliance to Stop Impaired Driving

Responsibility.org

Ride Share

Safety Advocates

Insuranc e

Law Enforcement/Courts

Fed. Govt.

Toxicology

Promoting Technologies to fight impaired driving

Policy/Legislation

Public Awareness and Education

State Implementation

Training

NASID
Jen Knudsen, CO TSRP
Cannabis is everywhere.

But it's legal. And, good for you.
We are trying to do everything with nothing.
THE LAW

zero tolerance-per se-general presumption-inference
THE DEFINITION OF DRUG

• Schedule (federal or state—e.g., fentanyl analogs)
• Drug Evaluation & Classification Program
• Statutory definition
Law Enforcement
STANDARDIZED FIELD SOBRIETY TESTING

• Not validated for drugs other than alcohol
• Increased court time
• Back to basics training
ADVANCED ROADSIDE IMPAIRED DRIVING ENFORCEMENT

When?

Voluntary?

Tests are NOT validated!

Presented to

[Type Name]

for

[Type Reason for Receiving]
DRUG EVALUATION & CLASSIFICATION PROGRAM

COLORADO
DRUG RECOGNITION EXPERT

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## Drug Matrix

<table>
<thead>
<tr>
<th></th>
<th>CNS Depressants</th>
<th>CNS Stimulants</th>
<th>Hallucinogens</th>
<th>Dissociative Anesthetics</th>
<th>Narcotic Analgesics</th>
<th>Inhalants</th>
<th>Cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HGN</strong></td>
<td>Present</td>
<td>None</td>
<td>None</td>
<td>Present</td>
<td>None</td>
<td>Present</td>
<td>None</td>
</tr>
<tr>
<td><strong>VGN</strong></td>
<td>Present (High Dose)</td>
<td>None</td>
<td>None</td>
<td>Present</td>
<td>None</td>
<td>Present</td>
<td>None</td>
</tr>
<tr>
<td><strong>Lack of Convergence</strong></td>
<td>Present</td>
<td>None</td>
<td>None</td>
<td>Present</td>
<td>None</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td><strong>Pupil Size</strong></td>
<td>Normal (1)</td>
<td>Dilated</td>
<td>Dilated</td>
<td>Normal</td>
<td>Constricted</td>
<td>Normal (4)</td>
<td>Dilated (6)</td>
</tr>
<tr>
<td>(2.5 - 5.0) normal room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5.0 - 8.5) normal dark</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.0 - 4.5) normal direct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reaction to Light</strong></td>
<td>Slow</td>
<td>Slow</td>
<td>Normal (3)</td>
<td></td>
<td>Little to None Visible</td>
<td>Slow</td>
<td>Normal</td>
</tr>
<tr>
<td>more than 1 second is slow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pulse Rate</strong></td>
<td>Down (2)</td>
<td>Up</td>
<td>Up</td>
<td>Up</td>
<td>Down</td>
<td>Up</td>
<td>Up</td>
</tr>
<tr>
<td>(60-90 bpm is normal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blood Pressure</strong></td>
<td>Down</td>
<td>Up</td>
<td>Up</td>
<td>Up</td>
<td>Down</td>
<td>Up / Down (5)</td>
<td>Up</td>
</tr>
<tr>
<td>(systolic normal 120-140)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(diastolic normal 70-90)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Body Temperature</strong></td>
<td>Normal</td>
<td>Up</td>
<td>Up</td>
<td>Up</td>
<td>Down</td>
<td>Up / Down / Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>98.6°F is normal, +/- 1 degree is up / down</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Muscle tone</strong></td>
<td>Flaccid</td>
<td>Rigid</td>
<td>Rigid</td>
<td>Rigid</td>
<td>Flaccid</td>
<td>Normal or Flaccid</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**FOOTNOTE:** These indicators are those most consistent with the category, keep in mind that there may be variations due to individual reaction, dose taken and drug interactions.

1. Soma, Quaaluides and some anti-depressants usually dilate the pupils.
2. Quaaluides, ETOH and some anti-depressants may elevate the pulse rate.
3. Certain psychedelic amphetamines may cause slow reaction to direct light.
4. Normal, but may be dilated.
5. Down with anesthetic gases, up with volatile solvents.
6. Pupil size possibly normal.
<table>
<thead>
<tr>
<th>State v. Ibis</th>
<th>CNS Depressants</th>
<th>Cannabis</th>
</tr>
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<tr>
<td>HGN</td>
<td>Present</td>
<td>None</td>
</tr>
<tr>
<td>Vertical Nystagmus</td>
<td>Present* (High dose)</td>
<td>None</td>
</tr>
<tr>
<td>Lack of Convergence</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Pupil Size</td>
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<td>Body Temperature</td>
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</tr>
<tr>
<td>Muscle Tone</td>
<td>Flaccid</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**SFSTs**
- **HGN**: / 6
- **WAT**: / 8
- **OLS**: / 4

**BAC**: 0.00

**General Indicators**

<table>
<thead>
<tr>
<th>CNS Depressants</th>
<th>Cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conflicting worlds

Medical v. DRE
EXPERT WITNESSES

Pharmacodynamics
What the drug does to the body

Pharmacokinetics
What the body does to the drug
GOOD AS GOLD?

TOXICOLOGY

Good as gold?
What are we missing & does it matter?
COSTS

• Who pays?
  • Kits
  • Delivery
  • Testing
  • Expert witnesses
### BLOOD

360 Cases analyzed (5 batches of 72) for 9 drugs of abuse class

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Cases Confirmed</th>
<th>Percentage of 360 Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>112 (31.1%)</td>
<td>31.1%</td>
</tr>
<tr>
<td>Opiates</td>
<td>19 (5.3%)</td>
<td>5.3%</td>
</tr>
<tr>
<td>Methamphetamine/MDMA</td>
<td>10 (2.8%)</td>
<td>2.8%</td>
</tr>
<tr>
<td>Cocaine (Benzylecgonine)</td>
<td>16 (4.4%)</td>
<td>4.4%</td>
</tr>
<tr>
<td>Zolpidem</td>
<td>4 (1.1%)</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

**Average BAC**: 0.168 (0.000-0.416 g/100mls)

**Median BAC**: 0.163 (0.000-0.416 g/100mls)

Out of 360 cases, 164 cases were presumptive positive for at least one drug class (45.5%)

- **Marijuana**: 112 cases confirmed for THC and/or its metabolites (31.1% of the 360)
  - 92 cases confirmed for THC with a blood level of >1.0-27 ng/ml (25.6% of the 360 cases)
    - Of those 92 cases confirmed for THC, 31 cases were ≥5.0 ng/ml (33.7% of the 92 cases)

- **Benzodiazepines**: 31 cases confirmed for at least one Benzodiazepine (8.6% of the 360 cases)

- **Opiates**: 19 cases confirmed for at least one Opiate (5.3% of the 360 cases)

- **Methamphetamine/MDMA**: 10 cases confirmed for at least one Sympathomimetic Amine (2.8% of the 360 cases)

- **Cocaine (Benzylecgonine)**: 16 cases confirmed for Cocaine and/or its metabolites (4.4% of the 360 cases)

- **Zolpidem**: 4 cases confirmed for Zolpidem (1.1% of the 360 cases)
### SOME RESULTS

<table>
<thead>
<tr>
<th>Item 1.1</th>
<th>Drug</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethanol</td>
<td>0.073 +/- 0.004 g/100 mL</td>
<td>HS-GC/FID</td>
</tr>
<tr>
<td></td>
<td>Delta-9-tetrahydrocannabinol (THC)</td>
<td>12 +/- 2ng/mL</td>
<td>LC/MS/MS</td>
</tr>
<tr>
<td></td>
<td>11-hydroxy-9-tetrahydrocannabinol (HC-OH)</td>
<td>10 ng/mL</td>
<td>LC/MS/MS</td>
</tr>
<tr>
<td></td>
<td>11-nor-9-carboxy-delta-9-tetrahydrocannabinol (THC-COOH)</td>
<td>140 ng/mL</td>
<td>LC/MS/MS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethanol</td>
<td>0.206 +/- 0.010 g/100 mL</td>
<td>HS-GC/FID</td>
</tr>
<tr>
<td></td>
<td>Delta-9-tetrahydrocannabinol (THC)</td>
<td>7.0 +/- 1.3 ng/mL</td>
<td>LC/MS/MS</td>
</tr>
<tr>
<td></td>
<td>11-hydroxy-9-tetrahydrocannabinol (THC-OH)</td>
<td>3.6 ng/mL</td>
<td>LC/MS/MS</td>
</tr>
<tr>
<td></td>
<td>11-nor-9-carboxy-delta-9-tetrahydrocannabinol (THC-COOH)</td>
<td>50 ng/mL</td>
<td>LC/MS/MS</td>
</tr>
</tbody>
</table>
There is no magic number.

1 + 1 doesn't equal 2?
EXPRESSED CONSENT

• Administrative sanctions
  • Point system
  • Refusals
• Consciousness of guilt
• Unconscious draws
• Limits ability to get a warrant
C.R.S. §42-4-1301.1 et seq.

Any person who drives any motor vehicle upon the streets and highways and elsewhere throughout this state shall be required to submit to and to complete, and to cooperate in the completing of, a **test or tests** of such person's **blood, saliva, and urine** for the purpose of determining the **drug content** within the person's system when so requested and directed by a law enforcement officer having **probable cause** to believe that the person was driving a motor vehicle in violation of the prohibitions against DUI or DWAI and **when it is reasonable** to require such testing of blood, saliva, and urine to determine whether such person was under the influence of, or impaired by, one or more drugs, or one or more controlled substances, or a combination of both alcohol and one or more drugs, or a combination of both alcohol and one or more controlled substances.
NEW TECHNOLOGY

Screening Devices
An Evaluation of Data from Drivers Arrested for Driving Under the Influence in Relation to *Per Se* Limits for Cannabis, Barry Logan, Ph.D., f-ABFT, et al.
PLEA NEGOTIATIONS
Jury Nullification
ART OR SCIENCE?

The Trial
Thank you

Jen Knudsen, CDAC
The Under-Recognized Group

- High risk for re-offense but low substance use disorder (SUD) needs
  - Very different
  - Issues generally cognitive behavioral
  - Need to be handled differently
Monitoring / Accountability

- Monitoring works if verified/Court helps
  - No effect if not verified
- Reduction in recidivism while monitored
  - Ignition Interlock Study in California - 3 months
  - NHTSA study on transdermal monitoring – 4 months
- Reversion to norm upon removal
  - 3 months & 4 months
Monitoring / Accountability

2019 San Joaquin County DUI Court Longitudinal Study

- 1 year of monitoring with installation verified
- No reversion to norm upon removal
- Reduction in recidivism increased every year for all 6 years measured
Participants in SJ DUI Court had 24% Fewer DUI Convictions 6 Years After Program Entry

Number of Years Post-Conviction

- SJ DUI Court (n=1,170)
- Comparison (n=1,262)
Treatment Track (HR/HN) vs Monitoring Track (Majority HR/LN)

Percent With New DUI Conviction by Track

<table>
<thead>
<tr>
<th>Year</th>
<th>Track 1 Monitoring (N=922)</th>
<th>Track 2 DUI Court (N=121)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>6%</td>
<td>25%</td>
</tr>
<tr>
<td>Y2</td>
<td>9%</td>
<td>36%</td>
</tr>
<tr>
<td>Y3</td>
<td>13%</td>
<td>38%</td>
</tr>
</tbody>
</table>
Monitoring Track v. Treatment Track

HBD Crashes

Year 1

Year 2

Year 3

- Monitoring Track
- Treatment Track
Monitoring Track v. Treatment Track

All Crashes

![Bar Graph](image-url)
Overall Track %

- Monitoring Track Approx. 3,672
- Treatment Track-Approx. 1,428
Cost Per Client by Track

Monitoring Track - 70% of Participants/28% of Total Costs

- Total Cost: 3,966
- Taxpayer Cost: 1,722

Treatment Track

- Total Cost: 13,929
- Taxpayer Cost: 11,874

Only 14% of Taxpayer Costs
Court Session Cost Per Client by Track in Dollars

Total Court Cost per Client

544

2,034 (3.7 x higher)