Drugged Driving, Roadside Oral Fluid Testing & the Computerized Assessment and Referral System (CARS)

NASID
National Alliance to Stop Impaired Driving

RESPONSIBILITY.ORG

Tennessee Judicial Conference

October 8, 2021

RESPONSIBILITY.ORG

Darrin T. Grondel
Vice President,
Government Relations
& Traffic Safety

Chris Konschak
Senior Director
Government Relations &
Traffic Safety

RESPONSIBILITY.ORG MEMBER COMPANIES

Enhancing a legacy of responsibility and recognizing the power of collective action.

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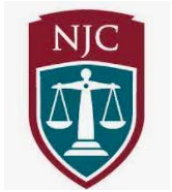
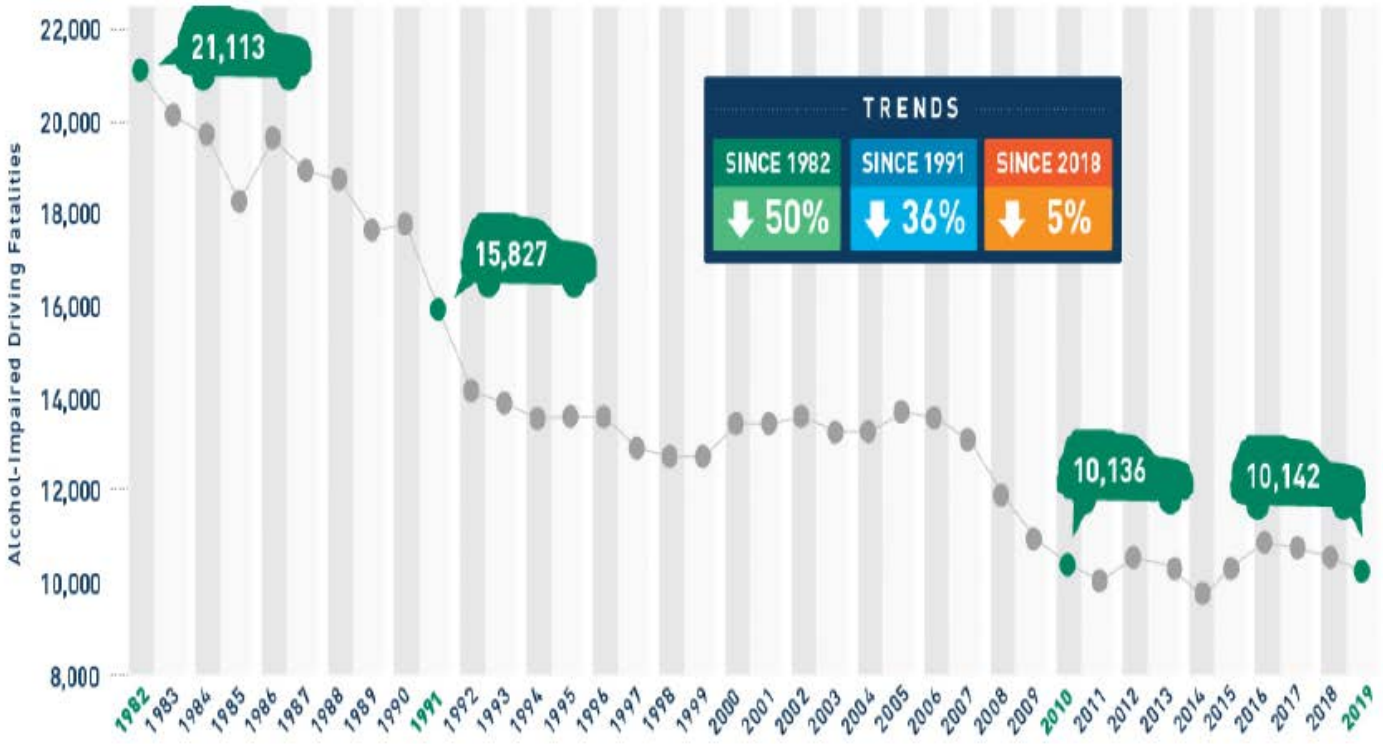
Partners & Collaboration



Drunk Driving Deaths Decreased in 2019



And we are committed to lead this fight until we reach zero.

Complexity of Impaired Driving and Public Perception

	DRUGGED DRIVING	DRUNK DRIVING
Number:	Hundreds of drugs	Alcohol is alcohol
Use by Driver, Presence in Crashes:	Limited Data	Abundant Data
Use by Drivers:	Increasing	Decreasing (at time of survey)
Impairment:	Varies by type	Well-documented
Beliefs & Attitudes:	No strong attitudes/public indifferent	Socially unacceptable

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).

GHSA Governors Highway Safety Association The States' Voice on Highway Safety

Data Drives the Narrative

- 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)


Pilot in deadly hot air balloon crash had marijuana, cocaine in his system
BREAKING NEWS
TOXICOLOGY REPORT ON PILOT
FIVE PEOPLE KILLED IN BALLOON CRASH IN JUNE
KOB 4

What does Impairment look like in Tennessee or in your court?

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 polic countermeasures

https://www.responsibility.org/toolkit

Roundtable Update and Review of New Resources

Cannabis Impairment Detection Workshop

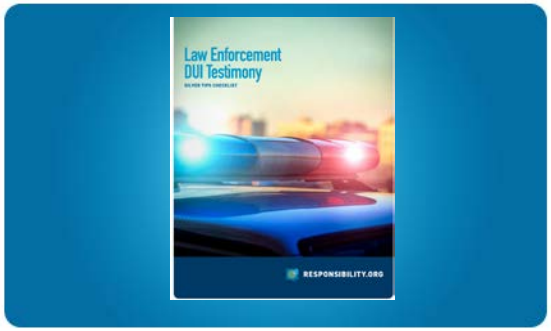
A guide to help law enforcement detect Cannabis Impairment in driving.

READ MORE

DUI Pretrial Services Guide

A guide to Pretrial Services

VIEW



Law Enforcement DUI Testimony

A checklist for DUI testimony.

VIEW

Responsibility.org Position Statements

FOUNDATION FOR ADVANCING ALCOHOL RESPONSIBILITY

Oral Fluid Screening for Impaired Drivers

Increases in drug and multi-substance impaired driving call for expanded drug testing on the roadside. For officers who are not specially trained in drug impairment 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 objective reading of the test strip.

Oral fluid test devices screen for specific drugs or drug classes that commonly appear among impaired drivers [cannabis (Tetrahydrocannabinol (THC)), cocaine, methamphetamine, amphetamine, opioids, and benzodiazepines]. A positive result indicates recent drug use which alongside the officer's evaluation of impairment, can aid in detecting recent consumption of drugs (i.e., not several days or weeks prior to arrest).

Oral fluid screening devices are preliminary screening tests that can be used to establish probable cause in combination with other evidence. At the time of testing, the officer has concluded that a driver is impaired using the SFST and is subsequently unable to safely operate a motor vehicle. The on-site oral fluid screen is used to identify what drug class(es) is/are likely causing 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 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 (SOFT) 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 collections that are minimally invasive;
- No warrant required to collect samples;
- Demonstrated accuracy, sensitivity, and specificity;
- 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 .08);
- Admissible in certain hearings (e.g., probable cause);

FOUNDATION FOR ADVANCING ALCOHOL RESPONSIBILITY

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 and CO data in Grondel, 2018 and Bui & Reed, 2019). **Driving under the influence (DUI) 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 laboratory policies prohibit drug testing if a BAC is above .08 or .10 unless a request for additional testing is made, allowing drivers impaired by multiple substances to avoid accountability. If drug use is not identified, it cannot be monitored or treated and multi-substance impaired driving, which poses 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) dissipates quickly. In most states, blood tests confirm drug presence in a DUI suspect's system. However, due to delays in obtaining blood draws, test results often do not reflect drug concentration levels at the time of driving on account of rapid metabolization. When a suspect refuses to voluntarily submit to a breath test or a blood draw, a warrant must be obtained. Additionally, in most jurisdictions, a certified 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. To guard against the loss of evidence, officers must efficiently collect blood or other chemical samples that are then analyzed to confirm drug presence in DUI cases. **Four strategies are being implemented in 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 phlebotomy programs** that reduce time required to obtain a blood sample and safeguard 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 demands, are adequately staffed, and using advanced technology.

Electronic warrant systems (e-warrants) help officers quickly obtain a search warrant for blood to accurately determine BAC or toxicology results and streamline the arrest process. Other benefits of e-warrants include reduced workloads, fewer errors, stronger DUI cases, speedier case resolutions, fewer burdens on the system, reduced refusal rates, and public deterrence. 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 15-20 minutes. Implementation recommendations and examples of robust systems can be found in our *Guide to Implementing Electronic Warrants*. Both the International Association of Chiefs of Police (IACP)

FOUNDATION FOR ADVANCING ALCOHOL RESPONSIBILITY

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 continually shown that drugs used in combination or with alcohol produce greater impairment than substances used on their own (Compton, et al., 2009; Romano et al., 2014; Schulze et al., 2012). In describing this increased level of impairment, the analogy of ***1+1=3*** 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 2016, 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).
- The Driving under the Influence of Drugs, Alcohol and Medicines (DRUID) project of the European Commission found that individuals who drive under the influence of alcohol and drugs are up to 200 times more likely to be involved in a crash (Shulze et al., 2012; Griffiths, 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 (Grondel et al., 2018).
- The National Survey on Drug Use and Health (NSDUH) revealed that of the 19.3 million individuals age 18 and over who had a substance use disorder in 2018, 12.9% (2.5 million) struggled with the use of both illicit drugs and alcohol (SAMHSA, 2019).

Current Detection Challenges:

Multi-substance impaired driving is underreported. 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., Advanced Roadside Impaired Driving Enforcement (ARIDE) training or Drug Recognition Expert certification].

Marijuana Use Soaring Among College Students While Alcohol Use Drops, Study Finds
Shore News Network
By Harry Wilmerding
September 15, 2021

Marijuana use among college students has surged while alcohol use dropped, according to a recent National Institute of Health and National Institute of Drug Abuse study.

The "Monitoring the Future" study found that **44% of college students** said they used marijuana in 2020, an increase from 38% in 2015. More, "daily" or "near daily" marijuana use among college students increased from 5% to 8% over the last five years.

The number of college students who said they consumed **alcohol**, on the other hand, **dipped** from over 62% in 2019 to 56% in 2020, according to the report. Binge drinking among college students, defined as having five or more drinks in one outing, decreased from 32% in 2019 to 24% in 2020.

The report also found that 9% of students said they used **psychedelic drugs in 2020,** a 4% increase from 2019.

"The COVID-19 pandemic dramatically changed the way that young people interact with one another and offers us an opportunity to examine whether drug taking behavior has shifted through these changes," NIDA Director Nora D. Volkow said in a statement.
"Moving forward, it will be critical to investigate how and when different substances are used among this young population, and the impact of these shifts over time," Volkow added.

The "Monitoring the Future" study has tracked drug use among college students and adults ages 19-22 since 1980. The 2020 edition was conducted online, collecting data from 1,550 college students between March 20, 2020, and Nov. 30, 2020.

John Schulenberg, the study's lead investigator and a professor at the University of Michigan, told The Washington Post that the COVID-19 pandemic contributed significantly to the sharp decline in alcohol use.
"That's definitely one of the greatest pandemic effects," Schulenberg said. "We clearly see that young people use alcohol as something to be taken at parties and gatherings. With the pandemic, those weren't happening, so the alcohol intake and binge drinking dropped."

The study also highlighted the decline in cigarette, amphetamine and prescription drug use among college students.
Eighteen states have legalized recreational marijuana for adults over the age of 21, and 37 states allow for medical marijuana use, according to The Washington Post.
http://www.monitoringthefuture.org/pubs/monographs/mtf-vol2_2020.pdf

Drug Categories and Their Common Effects

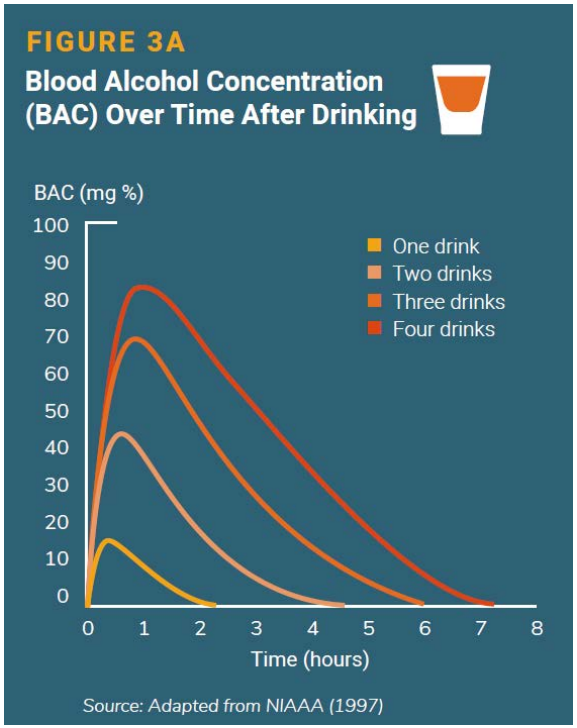
TARGET ZERO

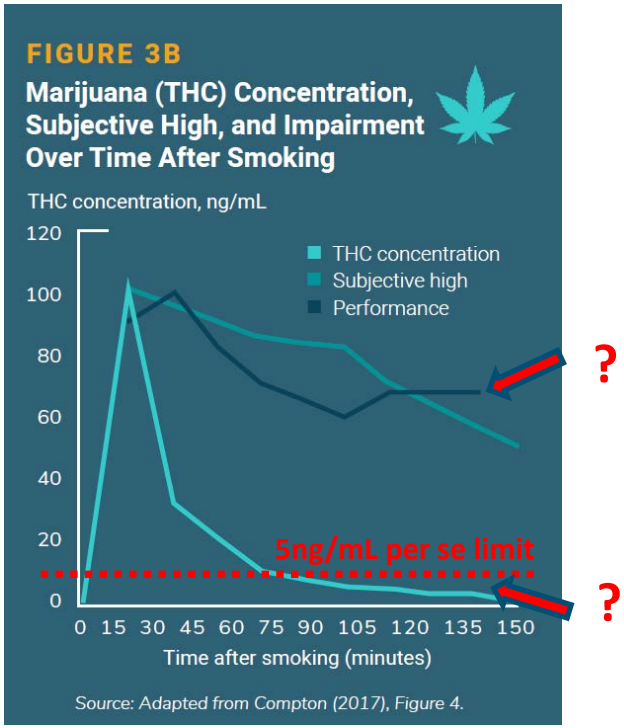
	CNS DEPRESSANTS	CNS STIMULANTS	HALLUCINOGENS	DISASSOCIATIVE ANESTHETICS	NARCOTIC ANALGESICS	INHALANTS	CANNABIS
COMMON EXAMPLES	Alcohol Valium Prozac Xanax Soma Rohypnol (roofies) GHB	Cocaine Crack Methamphetamine Adderall Ritalin Dexedrine MDPV (bath salts)	LSD (acid) MDMA (ecstasy) Peyote Psilocybin mushrooms	PCP Ketamine DXM (cough medicine)	Heroin Hydrocodone Vicodin Morphine Oxycontin Percodan Methadone	Solvents (gasoline, paint thinner, cleaning fluid, model glue) Aerosols (spray cans) Anesthetic gases (chloroform, whipped cream spray cans, nitrous oxide)	Marijuana Hash Hash oil Marinol Dronabinol K2 Spice
PUPIL SIZE	Normal	Dilated	Dilated	Normal	Constricted	Normal	Dilated
REACTION TO LIGHT	Slow	Slow	Normal	Normal	Little or none	Slow	Normal
BODY TEMPERATURE	Normal	Up	Up	Up	Down	Up/Down/Normal	Normal
MUSCLE TONE	Flaccid	Rigid	Rigid	Rigid	Flaccid	Normal or Flaccid	Normal
OTHER INDICATORS (users will not typically show all indicators)	•Euphoria •Depression •Laughing/crying for no reason •Reduced ability to divide attention •Disoriented •Sluggish •Thick, slurred speech •Drunk-like behavior •Droopy eyes •Fumbling •Relaxed inhibitions •Slowed reflexes •Uncoordinated •Drowsy	•Restlessness •Body Tremors •Excitement •Euphoria •Talkative •Exaggerated reflexes •Anxiety •Redness to nasal area •Runny nose •Loss of appetite •Increased alertness •Dry mouth •Irritability •Grinding teeth	•Hallucinations •Paranoia •Nausea •Perspiring •Dazed appearance •Flashbacks •Body tremors •Disoriented •Memory loss •Uncoordinated •Synesthesia (transposition of senses) •Difficulty in speech •Huge pupils (MDMA)	•Blank stare •Confused •Cyclic behavior •Perspiring •Chemical odor •Hallucinations •Possibly violent and combative •Warm to the touch •Increased pain threshold •Incomplete verbal responses •Repetitive speech	•Droopy eyelids •On the nod •Drowsiness •Depressed reflexes •Dry mouth •Low, raspy slow speech •Euphoria •Fresh puncture marks •Itching •Nausea •Track marks	•Confusion •Flushed face •Intense headaches •Bloodshot, watery eyes •Lack of muscle control •Odor of substance •Non-communicative •Disoriented •Slurred speech •Possible Nausea •Residue of substance around mouth and nose	•Odor of marijuana •Marijuana debris in the mouth •Body tremors •Increased appetite •Relaxed inhibitions •Disoriented •Possible paranoia •Eylid tremors •Reddened eyes

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 - thewisedrive.com

Marijuana Per Se Limits – Not Supported by Research and Science





- Impaired could go free; unimpaired could be convicted
- Blood draws often not fast enough
- Distorts how prosecutors (and jurors) process cases

Johns Hopkins University Study

Continued Impairment after Blood THC Levels Below LOQ

Interestingly, the time course of effects differed across outcome measur[illegible]n that increases in blood THC concentrations and HR returned to baseline m[illegible] drug effects and cognitive and psychomotor impairment. I[illegible]duced effects and/or impairments persisted for sev[illegible]ntrations had fallen below the LOQ. Additionally, bl[illegible]ly moderately correlated with subjective drug effects and weakly [illegible]orrelated at all, with cognitive and psychomotor performance. Collectively, findings from this study and others[16,29,30] indicate that blood THC concentrations are not a valid indicator of a user's intoxication and/or impairment from cannabis use and highlight the need to explore other biological and behavioral means of detecting acute cannabis impairment.

NO BAC FOR THC

Inhaling - Pulmonary

Smoking

Vaporizing

Dabbing

Inhale

Oral - Digestive

Edibles

Capsules

Raw Cannabis

Trans mucosal – sublingual, intranasal, rectal, ocula

Tincture

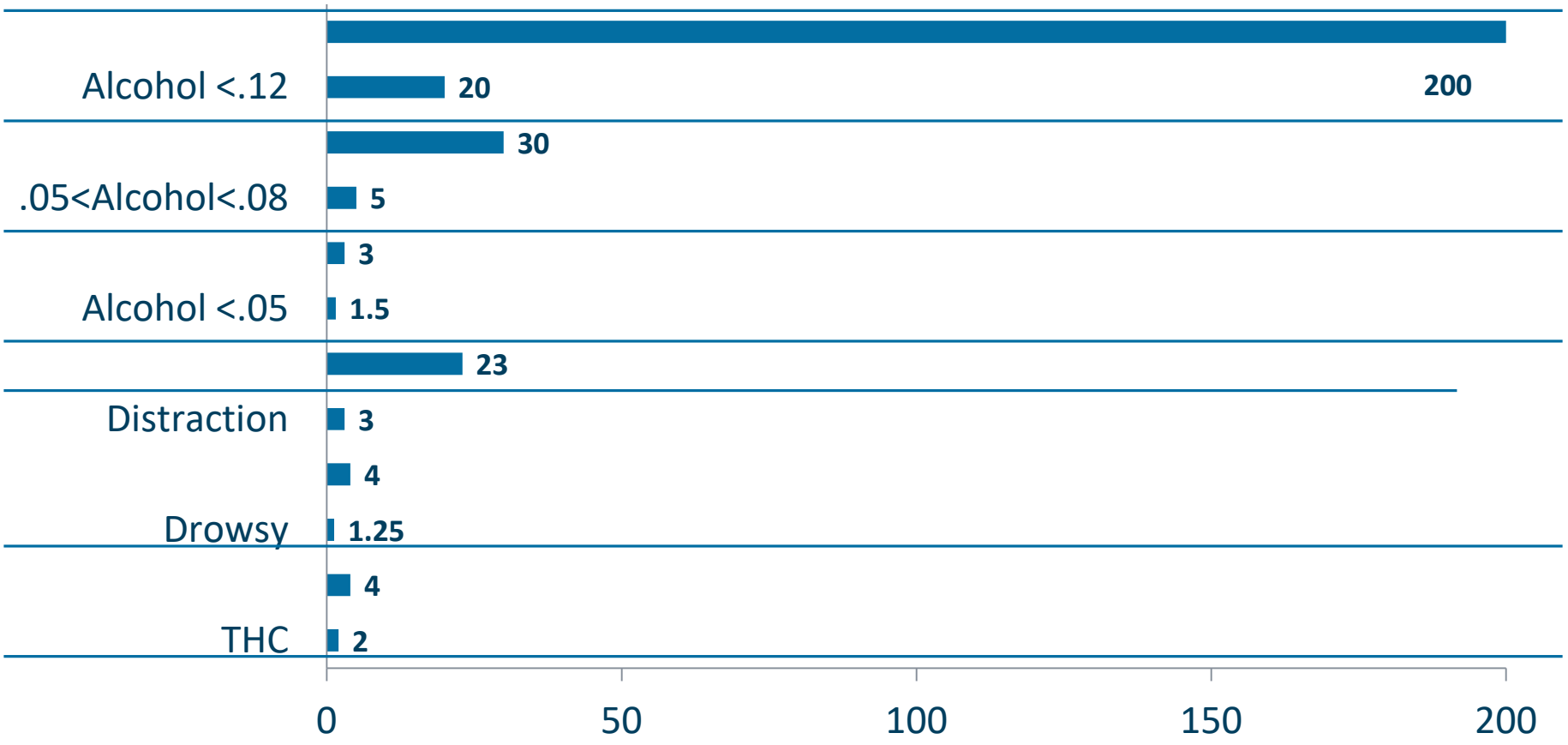
Lozenges

Spray - oral/nasal

Suppository

Transdermal

Does Cannabis Use Increase Crash Risk?



Review of literature revealed varying crash risk and difficult with THC

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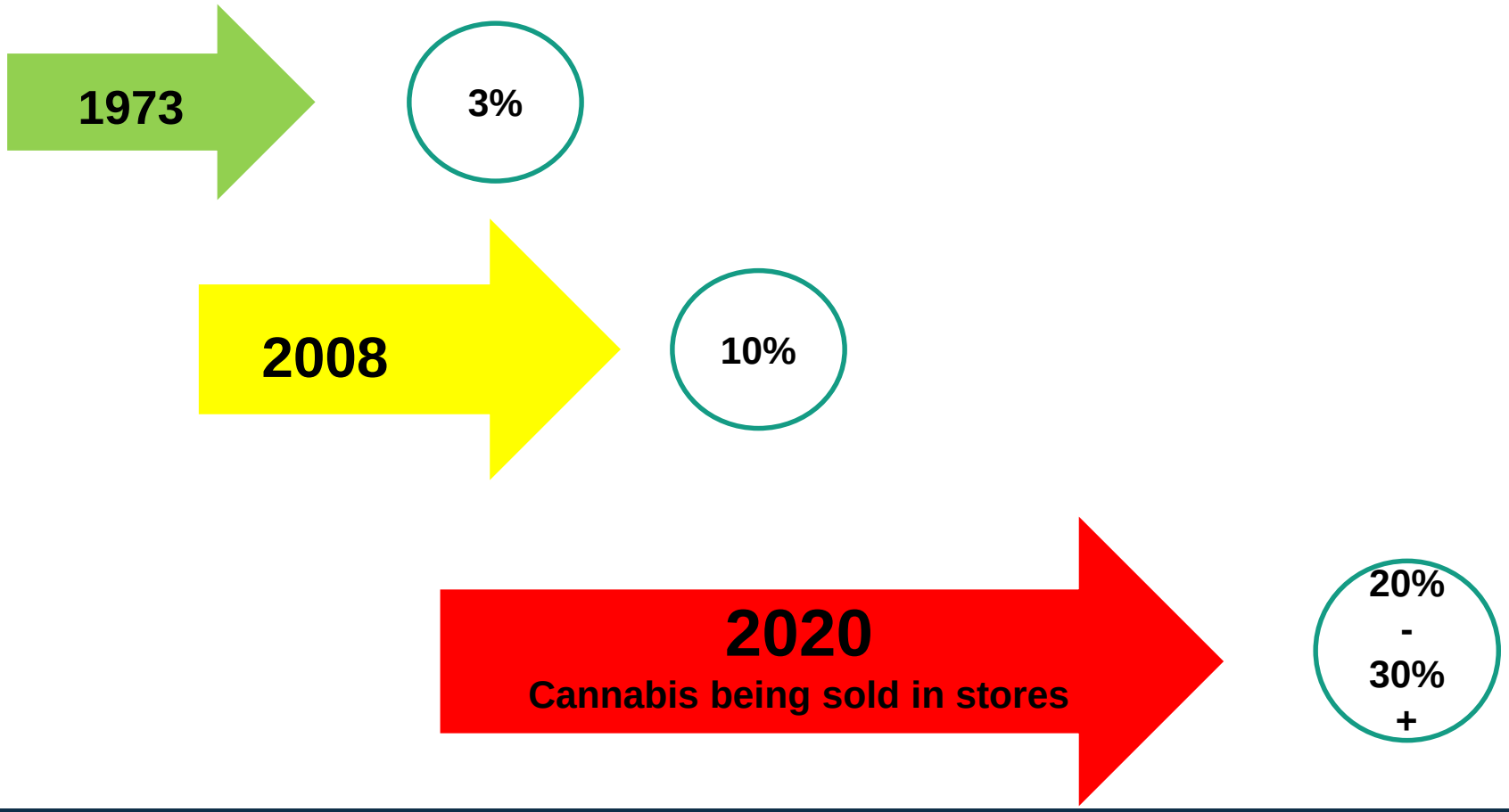
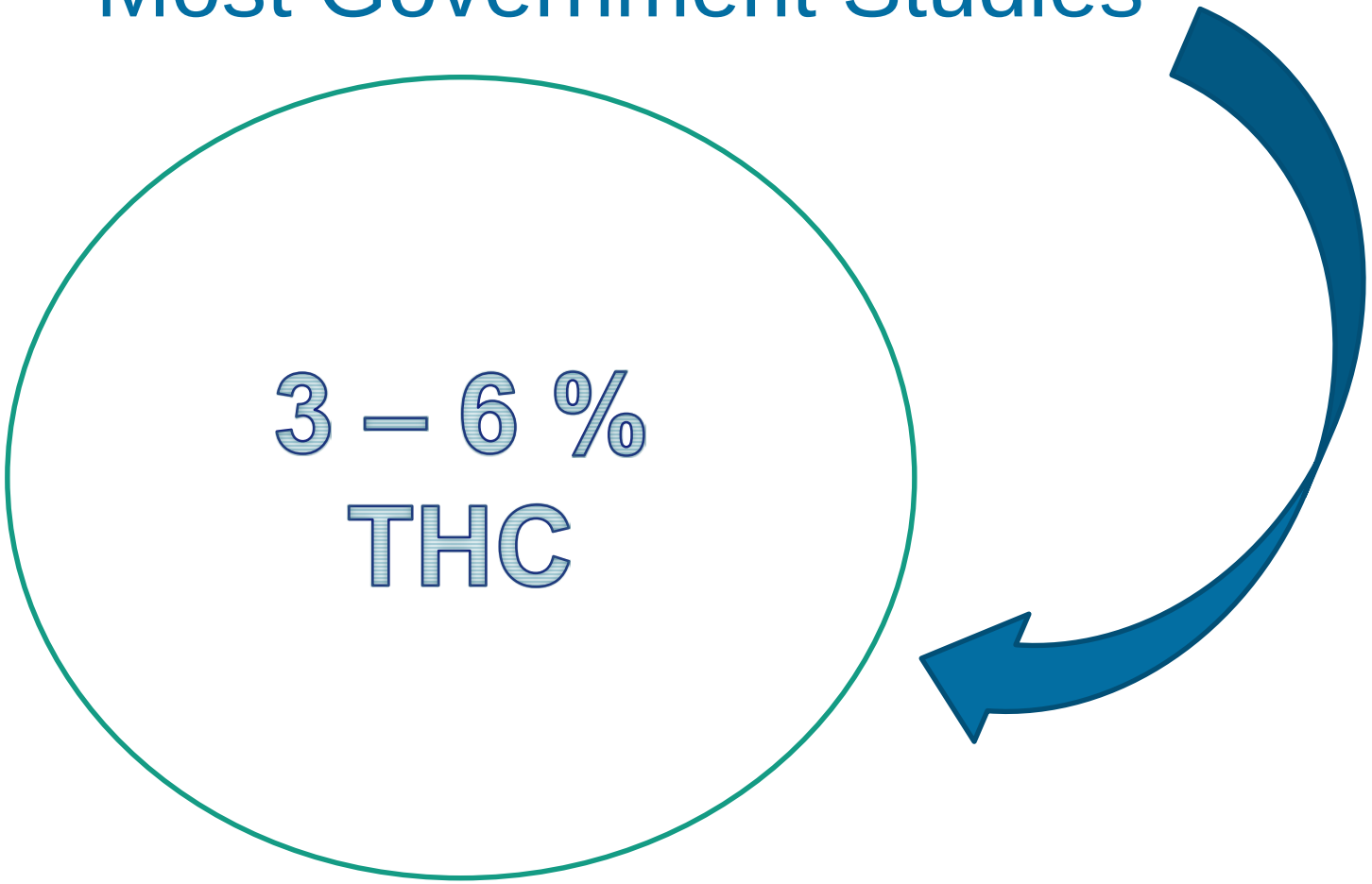
“Not Your Daddy’s Woodstock Weed”



THC Potency Used In Most Government Studies



Estimated Duration of Effects After Smoking or Ingesting THC

	Peak Effects (After last smoking episode)	Duration of Effects	Behavioral and psychological effects return to baseline	Residual Effects
Smoked	1-30 minutes	2-3 hours	3-5 hours	Up to 24 hours
Oral/Edible	1-3 hours	4-8 hours	Dose Dependent	Dose Dependent

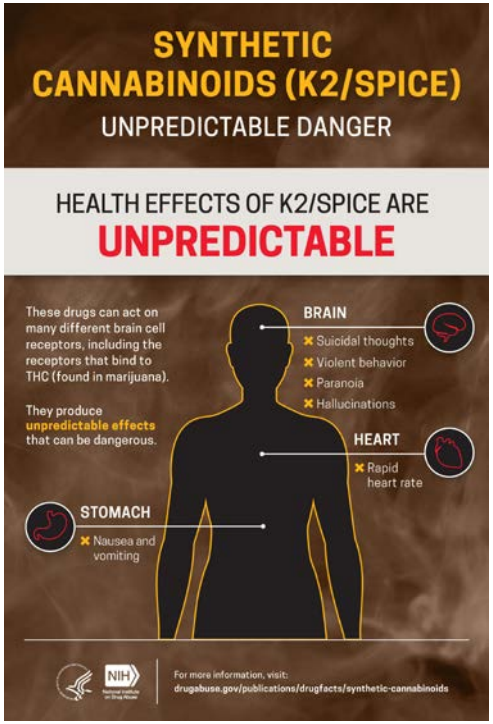
A recent study showed that THC blood concentration decreased 73.5% in the first 30 minutes and 90.3% in first 1.4 hours (2.9 – 6.7% THC).

Hartman, R.L. et al., "Effect of Blood Collection Time on Measured 9-Tetrahydrocannabinol Concentrations: Implications for Driving Interpretation and Drug Policy." Clinical Chemistry 62, no.2 (2016): 367-377.

*Note: *Additional research is needed to understand all methods of ingestion and the effects, durations, and long term-impacts*

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




Spice
DIAMOND


Scooby Snax
DEA

Synthetic Cannabinoids

- How is it consumed?
  - Smoked – Joint
  - Pipes
  - E-cigarettes
  - Va
  - Dri

- 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

- 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

- 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

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

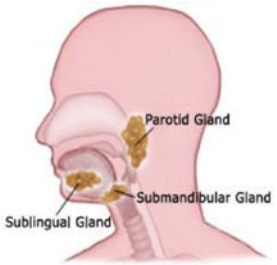
Prepping/training prosecutors and judges

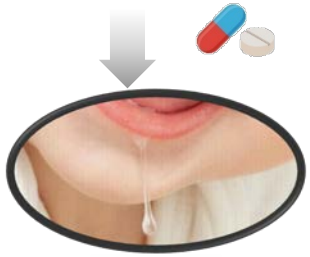
- Many prosecutors and judges still building familiarity with DUID cases – new evidence, new procedures, new technologies
- Alcohol easier to explain, prosecute
- Legislative, case law, and cultural landscapes shifting
- Marijuana perceptions among prosecutors, judges, and juries can differ

- Prosecutors:
  - Traffic Safety Resource Prosecutor
  - National Traffic Law Center (NTLC) and the National Center for DWI Courts (NCDC) offer training
- Judges:
  - Judicial Outreach Liaison
  - National Judicial College offers training
    - ***Handling Traffic Cases: An Eight-Part Webinar Series for Judges New to the Bench***

Oral fluid technology

Benefits of Oral Fluid Testing



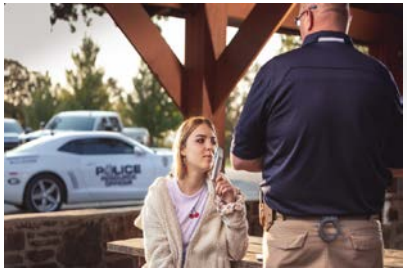


- **Suitable matrix to test for recent drug use**

  Presence of psychoactive parent drugs rather than inactive metabolites

  “ultrafiltrate of blood”

- **Rapid, simple, non-invasive,** does not require same-sex observed collection
- Specimen can be taken proximate to time of incidence or crash
- No requirement for medical professionals to take samples

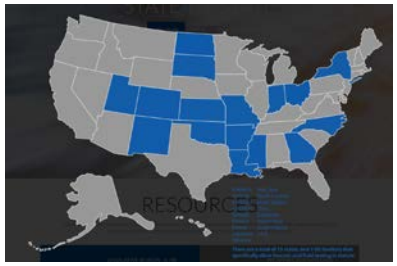


- **Difficult to adulterate the specimen**

- **There is legislation in place**

  US: 15 states, one Territory allow forensic OF testing in statute

  CAN: OF drug screening equipment approved for legal use
  → another tool for law enforcement!



www.StopDUI.org

Testing options: Oral fluid

- Oral fluid can be collected under the observation and supervision of an officer more quickly following a stop than urine or blood; it is a more reliable indicator of drugs present in the body at the time of the stop.
- Active drugs detected in saliva (e.g., THC or cocaine) are indicative of recent intake, not historical use.
- Cost for laboratory analysis of oral fluid is essentially the same as the cost for blood analysis because similar instrumentation is used.
- Medical personnel are not necessary for the collection process, so the time and expense associated with blood collections are eliminated.

Benefits of Oral Fluid

- Drugs accumulate in saliva mainly by diffusion from the blood
- Reflection of drug circulating in the body
- Drug detection times similar to blood (except THC)
- Drug properties determine how much is deposited into oral fluid
  - Stimulants (amphetamines, cocaine)
    - higher concentration than in blood
  - Sedatives (benzodiazepines)
    - lower concentrations than in blood

DISPOSITION OF DRUGS IN ORAL FLUID

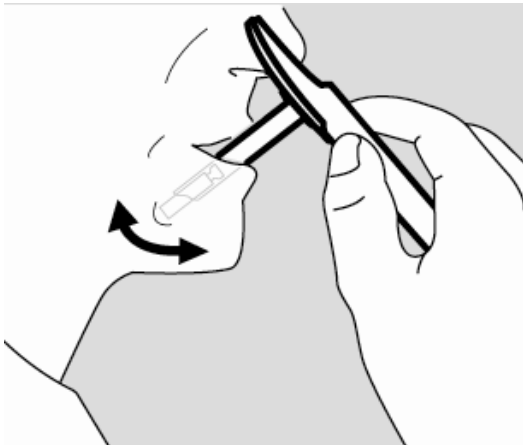
- Equilibrium between blood and oral fluid promotes accumulation of basic, free drugs into oral fluid (amphetamines; cocaine etc.)

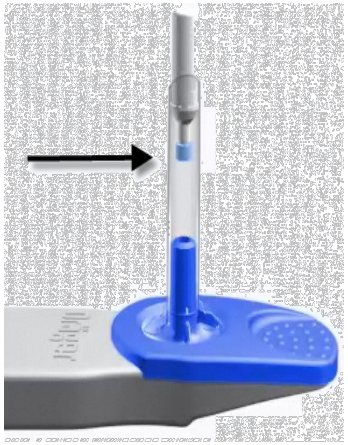
- Acidic protein bound drugs do not incorporate easily into oral fluid (e.g. benzodiazepines)

- Pain medications (oxycodone, hydrocodone, morphine) accumulate very well into oral fluid

Sample collection

- Remove protective cap from the cassette.
- Hand test cassette over to test subject to be tested.
- The sampler has to be moved for one minute around the inside of the mouth.
- Should the sample be adequacy, the indicator has turned blue, sampling can be stopped.
- If not, continue for additional three more minutes.





Principle of Rapid Tests
Test Kit Technology

Test Kit Technology:

For our purposes, the definition of an **Immunoassay** is a **test** that measures the presence of an ***antigen*** (drug) in a solution through the utilization of an ***antibody***.

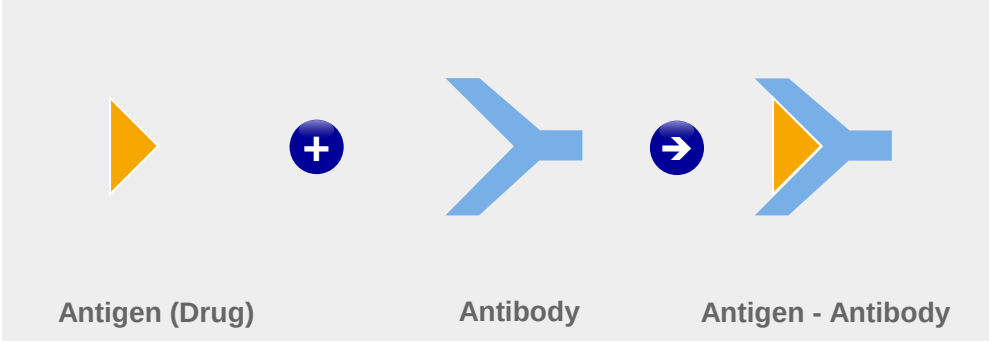
Antigen: any substance that initiates an adaptive immune response.

Antibody: a protein produced by the body's immune system when it detects harmful substances called ***antigens***.

Antigen
antigenic macromolecule

Antibody
made by Immune System

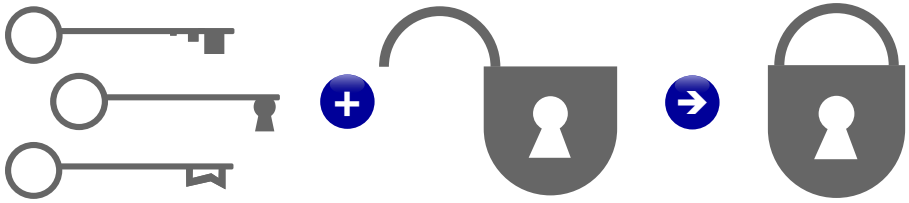
Principle of Rapid Tests
Key-Lock principle



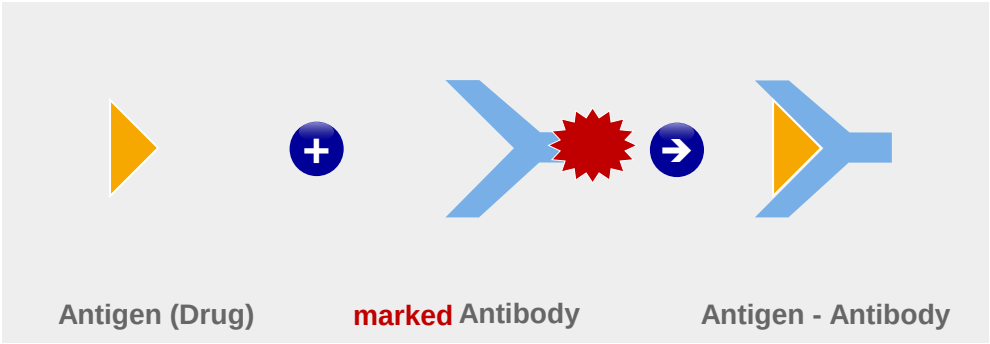
The antibody is the "sensor", which searches for the drug.

Requirement:

- high specificity
- high sensitivity



Principle of Rapid Tests
Key-Lock principle



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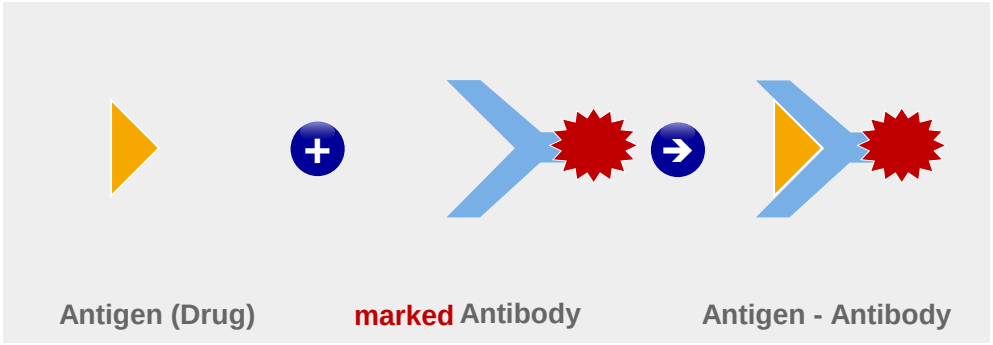
Principle of Rapid Tests
Key-Lock principle



The antibody is the "sensor", which searches for the drug.

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An assessment of oral fluid drug screening devices

Douglas J. Beirness & D'Arcy R. Smith

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Taylor & Francis

Comparing Drug Detection in Oral Fluid and Blood: Data From a National Sample of Nighttime Drivers

T. KELLEY-BAKER[1], C. MOORE[2], J. H. LACEY[1], and J. YAO[1]

[1]*Pacific Institute for Research and Evaluation, Calverton, Maryland*
[2]*Immunalysis Corporation, Pomona, California*

Received 3 February 2013, Accepted 11 April 2013

J Anal Toxicol. 2017 Jul 1;41(6):523-529. doi: 10.1093/jat/bkx051.

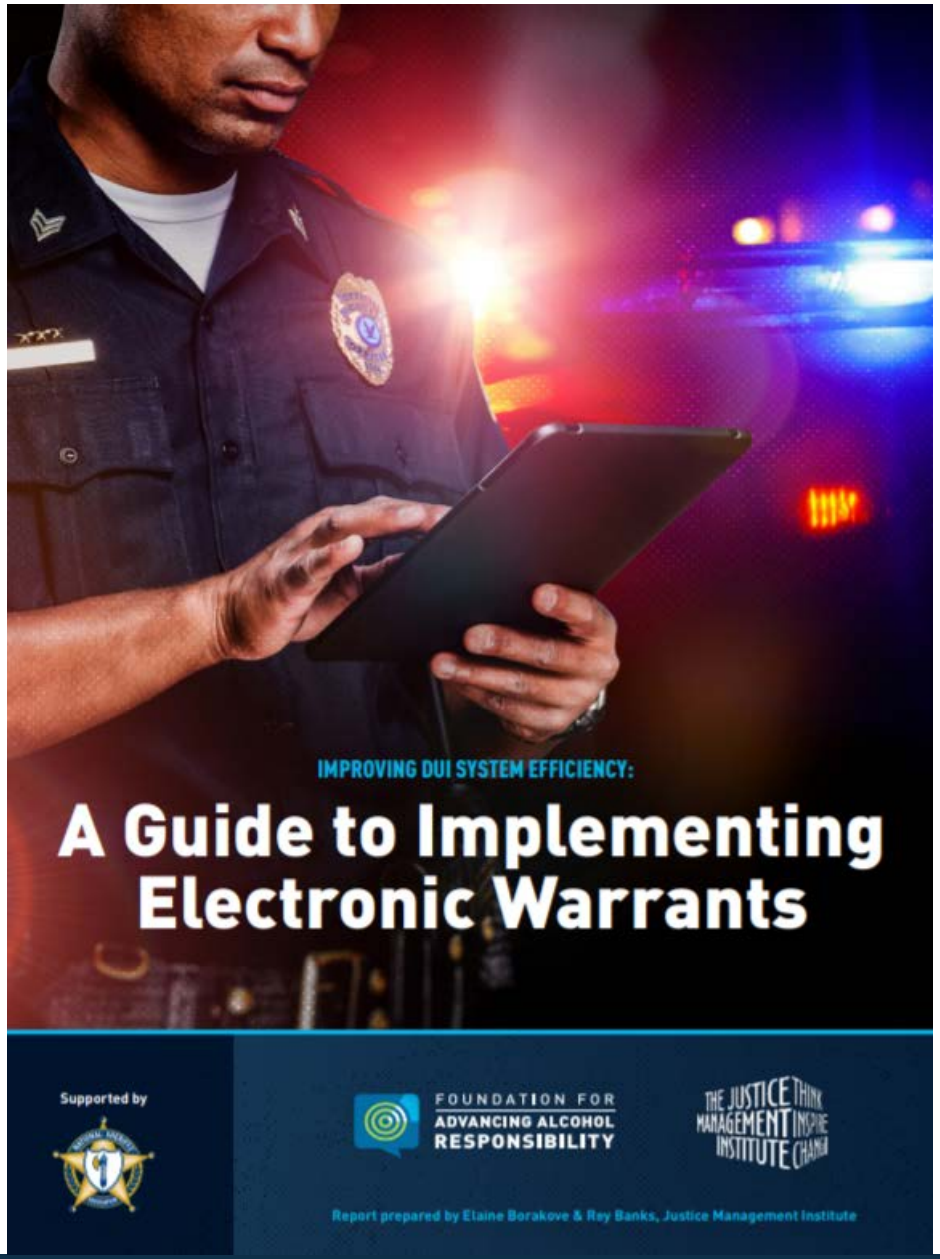
Drugged Driving in Wisconsin: Oral Fluid Versus Blood

Edwards LD[1], Smith KL[1], Savage T[1].

Detection and Prevalence of Drug Use in Arrested Drivers Using the Dräger Drug Test 5000 and Affiniton DrugWipe Oral Fluid Drug Screening Devices

Barry K. Logan[1,2*], Amanda L. A. Mohr[1] and Stephen K. Talpins[3]

[1]The Center for Forensic Science Research and Education, Willow Grove, PA, USA, [2]NMS Labs, Willow Grove, PA, USA and [3]Institute for Behavior and Health Inc., Rockville, MD, USA



www.responsibility.org/ewarrants

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

https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/14222-phlebotomy_toolkit_final-032819-v1a_tag_0.pdf

High Risk Impaired Drivers

Conviction Focused Approach	Individualized Justice Approach
Law enforcement trained only on alcohol	Expanded DUID training (ARIDE, DRE, oral fluid)
Test only for alcohol if per set limit reached	Test for alcohol and drugs
Multiple prosecutors handle a single DUI case	Vertical prosecution
Cases heard in criminal/civil courts	DUI and treatment courts
Inconsistent screening & assessment using generic tools	Screening & assessment at multiple phases using tools validated specifically among the DUI population
Emphasis on punishment (fines & jail) as prescribed in statute	Investment in treatment and supervision determined by multidisciplinary team and informed by assessment
Probation generalists	Mental Health/SUD probation specialists
Siloed data systems	Linked impaired driving data system

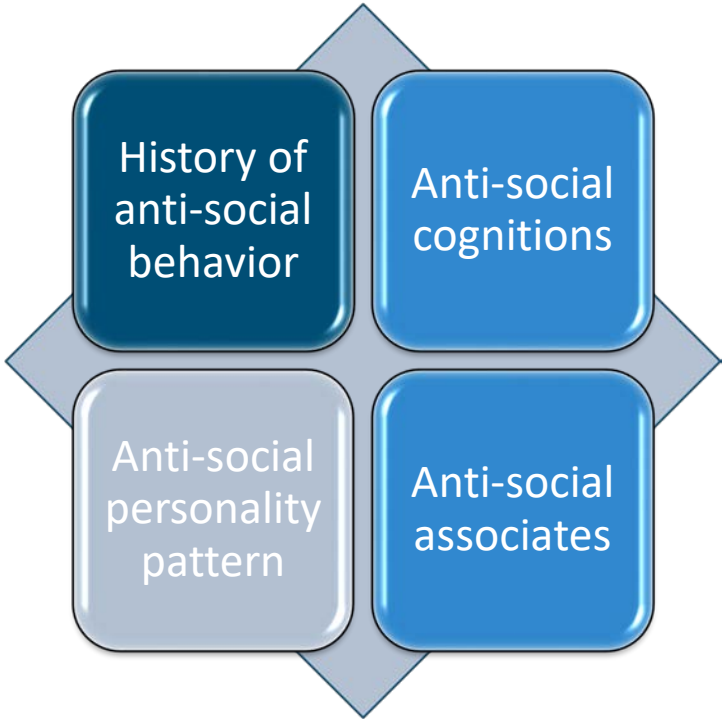
Leverage your State DUI Task Force or Impaired Driving Work Groups

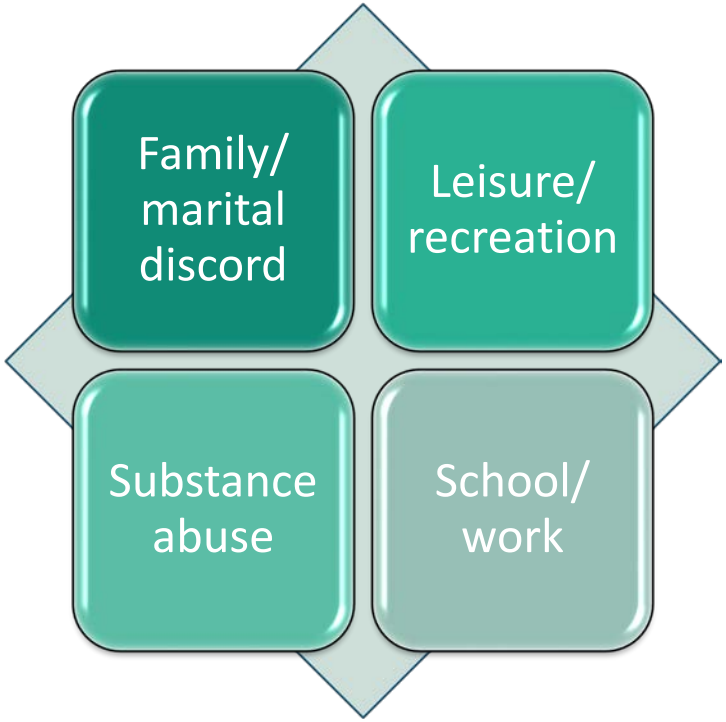
High Risk and Repeat Offenders

Approximately 25% of individuals arrested and 30% of individuals convicted of DUI are repeat offenders.

Contact with the criminal justice system in and of itself, does not deter at least 1/4 of all offenders.

Criminogenic Risk Factors





Mental Health?

While not a criminogenic need, it is imperative that mental health issues be identified and treated to adequately address other risk factors.

Screening and Assessment

Screening

- Screening is the first step in the process of determining whether a DUI offender should be referred for treatment.
- At this stage, offenders who do not have substance or mental health issues are identified and those who may have issues can be sent for a more in-depth assessment.
- Essentially, screening is a way to strategically target limited resources by separating offenders into different categories (i.e., those who do not have an alcohol/mental health problem and those who likely do).
- The screening process in and of itself can also serve as a brief intervention as it requires the individual to begin to think about their use patterns and whether they are problematic.

Screening – Who needs further assessment?

Assessment

- After the screening process is completed, offenders who show signs of substance or mental health issues can be referred for an assessment.
- An assessment tends to be more formal than screening and these instruments are standardized, comprehensive, and explore individual issues in-depth.
- In contrast with screening, a formal assessment process takes longer to complete (it can take several hours) and is typically administered by a trained clinician or professional.
- This second step is meant to evaluate not only the presence of a substance use disorder (alcohol and/or drugs) but its extent and severity.

Assessment

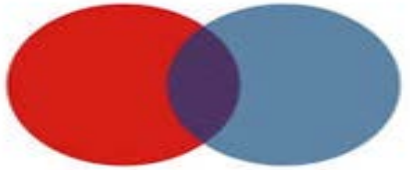
- Ideally, screening and assessment would occur at the beginning of the process (such as during the pre-trial stage).
- The results can then be used to inform:
  - Sentencing decisions
  - Case management plans
  - Supervision levels
  - Treatment referrals/plans

- It is important to note that assessments can be repeated at multiple junctures throughout an offender's involvement in the criminal justice system to identify progress and to inform changes to existing plans as needed.

Assessment can occur at multiple intercepts:

- Post-arrest
- Pre-trial
- Pre-sentencing
- Post-conviction
- Community supervision
- Treatment program

Co-occurring disorders



- While research has shown that impaired drivers frequently have a sub
  these offenders also have a psychiatric condition.
- The presence of a substance use disorder actually ***increases*** an individual's likelihood of having other psychiatric disorders.
- Co-occurring disorders are often difficult to diagnose as symptoms can be complex and the severity of the disorders can vary.

Co-occurring disorders

- In a study of repeat DUI offenders, it was found that 45% had a lifetime major mental disorder.
- Another study (Shaffer et el. 2007) that examined the prevalence of these disorders by gender found that 50% of female drunk drivers and 33% of male drunk drivers have at least one psychiatric disorder.
- Mental health issues often linked to impaired drivers include:
  - Depression, bipolar disorder, conduct disorder, anxiety, anti-social personality disorder, and post-traumatic stress disorder (PTSD).

The need for mental health assessment among impaired drivers

- Very high level of psychiatric co-morbidity in DUI populations.
- Mental health issues linked to recidivism.
- Treatment has traditionally consisted of alcohol education or interventions that focus solely on alcohol or substance use.
- Screening or assessment for mental health issues is not always available/performed.
- DUI treatment providers rarely have the training/experience to identify mental health issues among their clients.

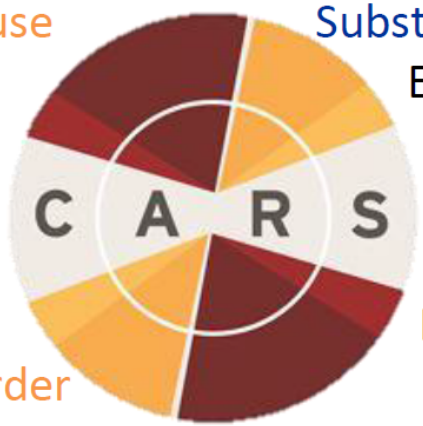
***Subsequently, in many cases, problems are not identified or addressed**

Computerized Assessment and Referral System

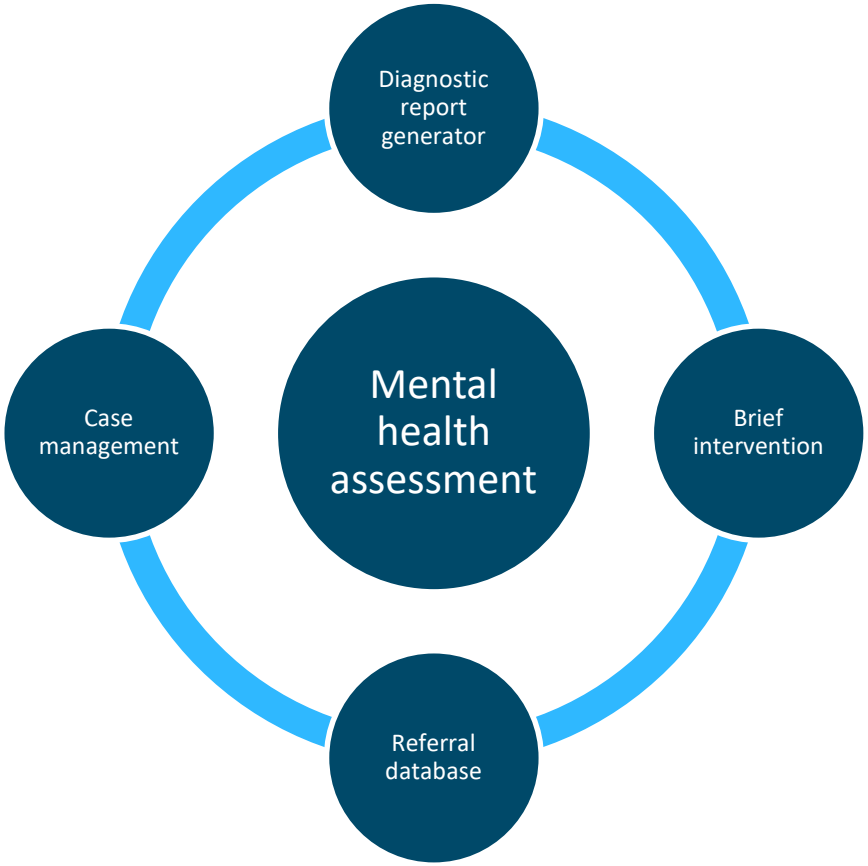
Development of CARS

- CARS was developed by a team of researchers from Cambridge Health Alliance, a teaching affiliate of Harvard Medical School.
  - Initial grant funding was provided by NIAAA; Responsibility.org continues to fund CARS research and implementation.
- The goal was to create an assessment tool specifically for a DUI offender population that fills the mental health void that exists with traditional instruments.

Generalized Anxiety Disorder Major Depressive Disorder Dysthymia Bipolar I Disorder Bipolar II Disorder Panic Disorder Alcohol Abuse Alcohol Dependence Post Traumatic Stress Disorder Substance Abuse Substance Dependence Personality Eating Disorders Tobacco Use DUI Behavior Oppositional Defiant Disorder Intermittent Explosive Disorder DUI Behavior Conduct Disorder Criminal History Personality Disorder Psychosocial Risks Peer Networks Psychosis Gambling Disorder Obsessive Compulsive Disorder Attention Deficit Hyperactivity Disorder… and more



What is CARS?


Diagnostic report generator
Case management
Mental health assessment
Brief intervention
Referral database

What is CARS?

- Diagnostic report generator that gives providers and clients:
  - Immediate diagnostic information for up to 20 DSM-V Axis I disorders (onset, recency, persistence).
  - Geographically and individually targeted referrals to treatment services based on the outcomes of the assessment.

Substance dependence

Mental health issues

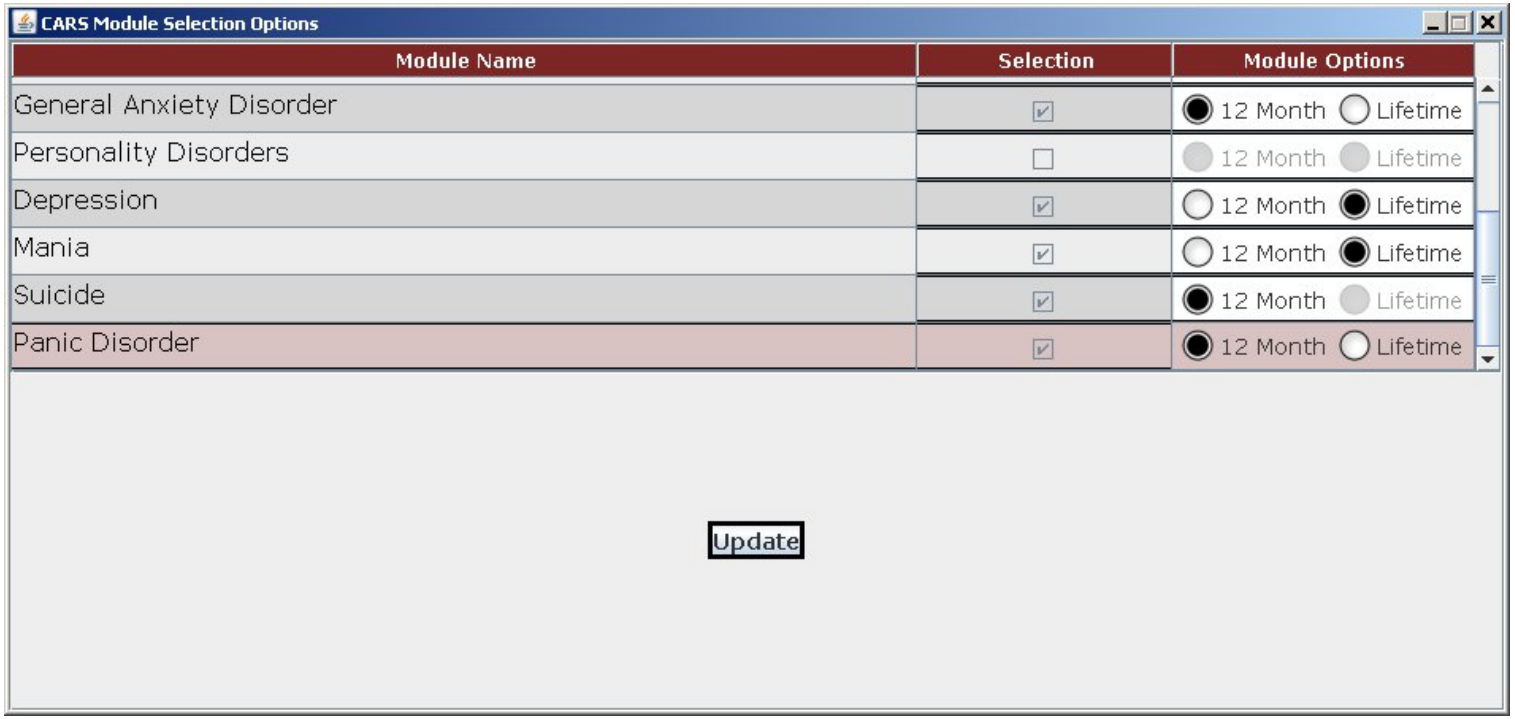
Intervention

How does CARS work?

- CARS is a completely electronic assessment tool. It is available as free open source software.
- There are three versions of the CARS tool that can be used:
  - Full assessment
  - Screener
  - Self-administered screener
- CARS is divided into modules representing various mental disorders and psychosocial factors.
  - The individual administering CARS can select any subset of modules.
- There is the ability to choose from a past 12-month or lifetime version of the questions for each disorder.

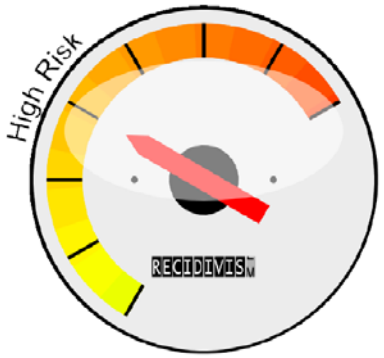
CARS comprehensive mental health screener domains		
Panic disorder	Social phobia	Eating disorders
Intermittent explosive disorder	Attention deficit/hyperactivity disorder	Obsessive compulsive disorder
Depression	Generalized anxiety	Suicidality
Mania/bipolar disorder	Post-traumatic stress disorder	Conduct disorder
Oppositional defiant disorder	Psychosis	Nicotine dependence
Alcohol use disorder	Drug use disorder	Gambling disorder
Psychosocial stressors	DUI/criminal behavior	

How does CARS work?

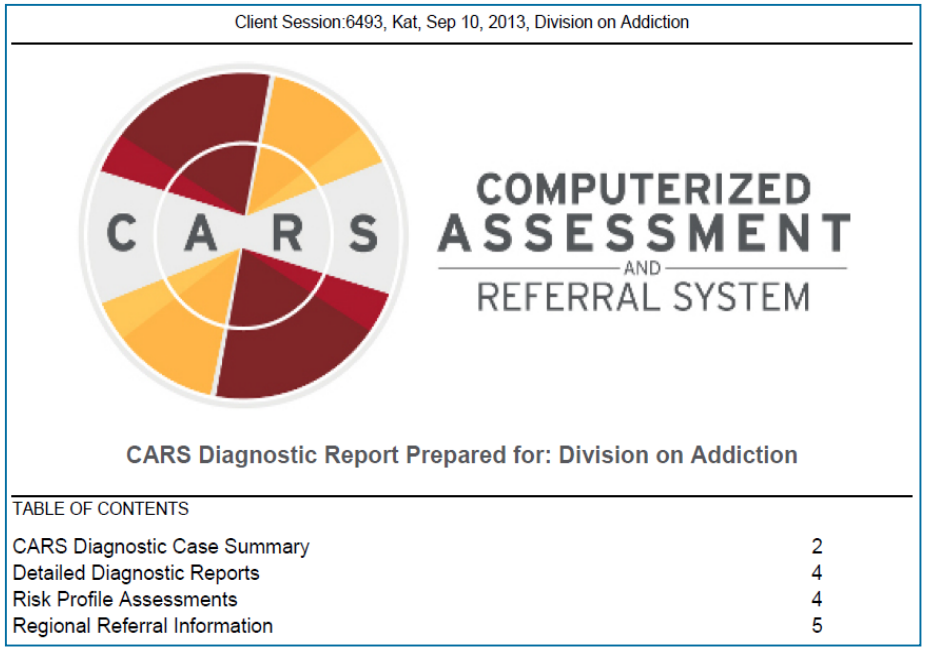


How does CARS work?

- Individual diagnostic reports have been programmed to provide information about the mental health disorders for which a person qualifies or is at risk, as well as a summary of bio-psycho-social risk factors.
- The CARS tool includes a section on DUI behavior.
  - The data obtained from the questions in this section is integrated with other risk factors to generate an overall DUI recidivism risk score.
  - A graphic is generated as part of the outcomes report that indicates where an individual is within a range of low to very high risk.



CARS Report



Client Session:6493, Kat, Sep 10, 2013, Division on Addiction

C A R S

COMPUTERIZED ASSESSMENT AND REFERRAL SYSTEM

CARS Diagnostic Report Prepared for: Division on Addiction

TABLE OF CONTENTS

CARS Report

CARS Diagnostic Case Summary

Bob is a 38 year-old woman who has accumulated 0 DUI arrests during her lifetime. She has met full criteria for 1 co-occurring mental health problem (see Table 1) and should receive a referral for additional professional mental health screening (regional referrals are listed on the end of the report)

Table 1. Mental Health Profile

	Met Criteria	Subclinical Symptoms	Screened into but not tested
Alcohol Abuse	PY		
Obsessive Compulsive Disorder			•
Psychosis			•
Conduct Disorder			•

PY = Past Year, LT = Lifetime

**Other disorders screened:PTSD, GAD, Alcohol Dependence, Substance Abuse, Substance Dependence, Personality Disorders, Major Depressive Disorder, Bipolar I, Bipolar II, Panic Disorder, Social Phobia, Intermittent Explosive Disorder, Tobacco Use, Gambling, Eating Disorders, ADHD*

Bob is at high risk for another DUI. Listed below are some of the factors that create this risk for Bob.

DUI Recidivism Risk Factors

- Alcohol Abuse
- Endorsed binge drinking

Based on Bob's mental health profile, she should consider seeking additional professional screening from the resources listed at the end of the report.

Bridging the gap…

- Unlike traditional assessments, CARS has a built-in referral system.
- CARS has been designed to include a list of individually-targeted referrals at the end of each report based on an individual's issues and zip code.
- Before CARS can be implemented, the referral list must be populated with treatment services that are available within that jurisdiction.

Benefit of CARS

- Provides immediate diagnostic information for up to 20 major psychiatric disorders.
- Provides geographically and individually targeted referrals to appropriate treatment services.
- Generates user-friendly reports at the click of a button.
- Informs supervision and treatment decisions.
- Runs on free open-source software.
- Can be used by non-clinicians.
- Applicable in a number of settings.

National Roll-Out

CARS was launched for general use in June 2017.

Available to any court, probation department, or program free of cost.

Online web portal for downloads and training: www.carstrainingcenter.org

Contact Information and Technical Assistance

Darrin T. Grondel
Vice President of Traffic Safety and Government Relations
(571) 397-2688
(571) 309-7615 (Cell)
Darrin.Grondel@responsibility.org

Chris Konschak
Senior Director, Traffic Safety and Government Relations
(202) 637-0571
(202) 812-3005
Chris.Konschak@responsibility.org