

***High on our Highways:
Addressing the Emerging Threat of
Drug-Impaired Driving***



Overview

- State of DUI in America
- Magnitude of the DUID problem
- Marijuana-impaired driving
- Complexities and challenges of the issue
- DUID policy and enforcement
- Supervision solutions/
recommendations



Southern Counties News



**NEWS
ALERT**

DRUGGED DRIVING

@MorningsMaria

9 E. 17th



foxbusiness.com/channelfinder







Boy, 4, Found in SUV With Adults Who Allegedly Passed Out on Heroin; Ohio Police Post Pics





STATE OF DUI IN AMERICA

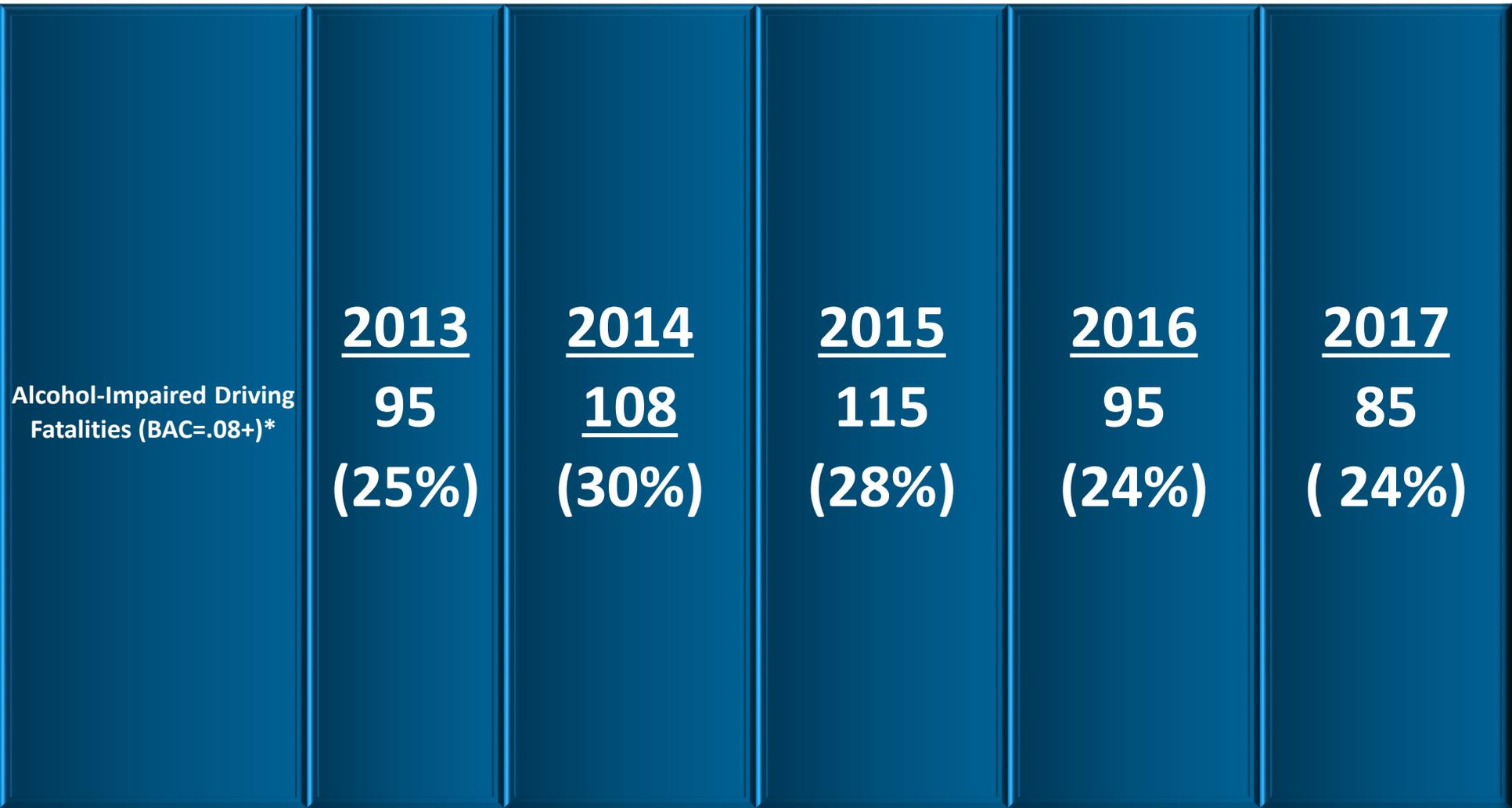
Drunk Driving Deaths Decreased in 2017



Data Source: NHTSA, FARS, 10/18

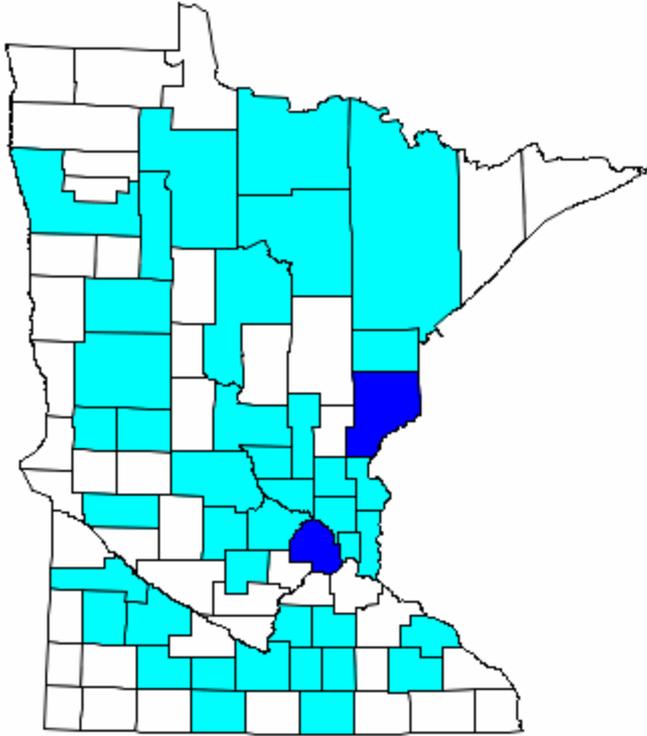


Minnesota DUI Fatalities

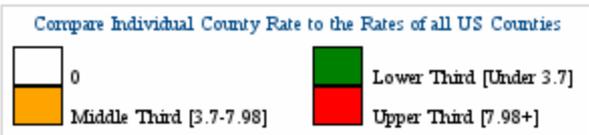
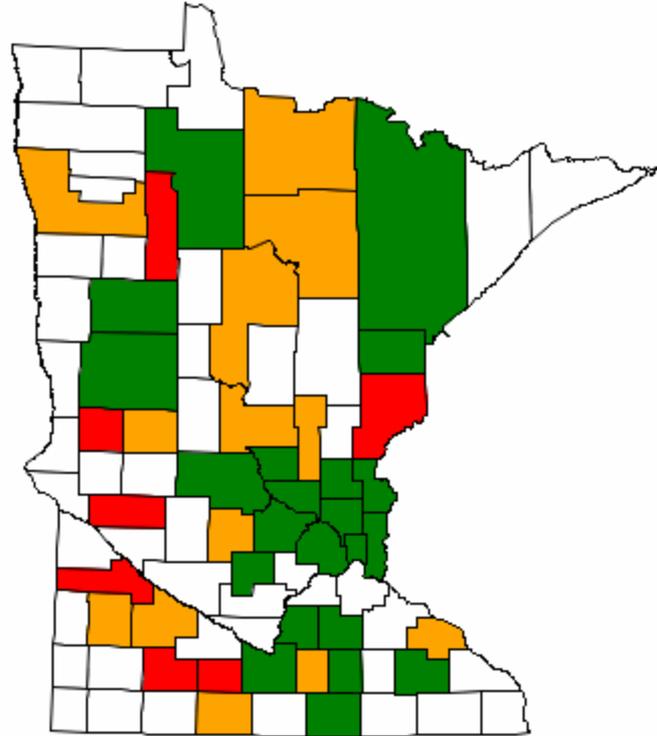


Fatalities in Crashes Involving an Alcohol-Impaired Driver (BAC = .08+) by County for 2017

Fatalities in Crashes Involving an Alcohol-Impaired Driver (BAC = .08+)



Fatalities in Crashes Involving an Alcohol-Impaired Driver (BAC = .08+) per 100,000 Population



DUI and Incarceration



- DUI cases involve 20% of all misdemeanor filings involving jail.
- Incarceration and sanctions have no positive long term impact on recidivism



Why have we made progress?

- **Passage of laws to target multiple facets of the problem**
- **Sustained and high visibility enforcement efforts**
- **Identifying the countermeasures that work; evaluation and strengthening of programs**
- **Targeting high-risk offenders**
- **Assessment and treatment**
- **Public education and awareness**
- **Changing societal norms**





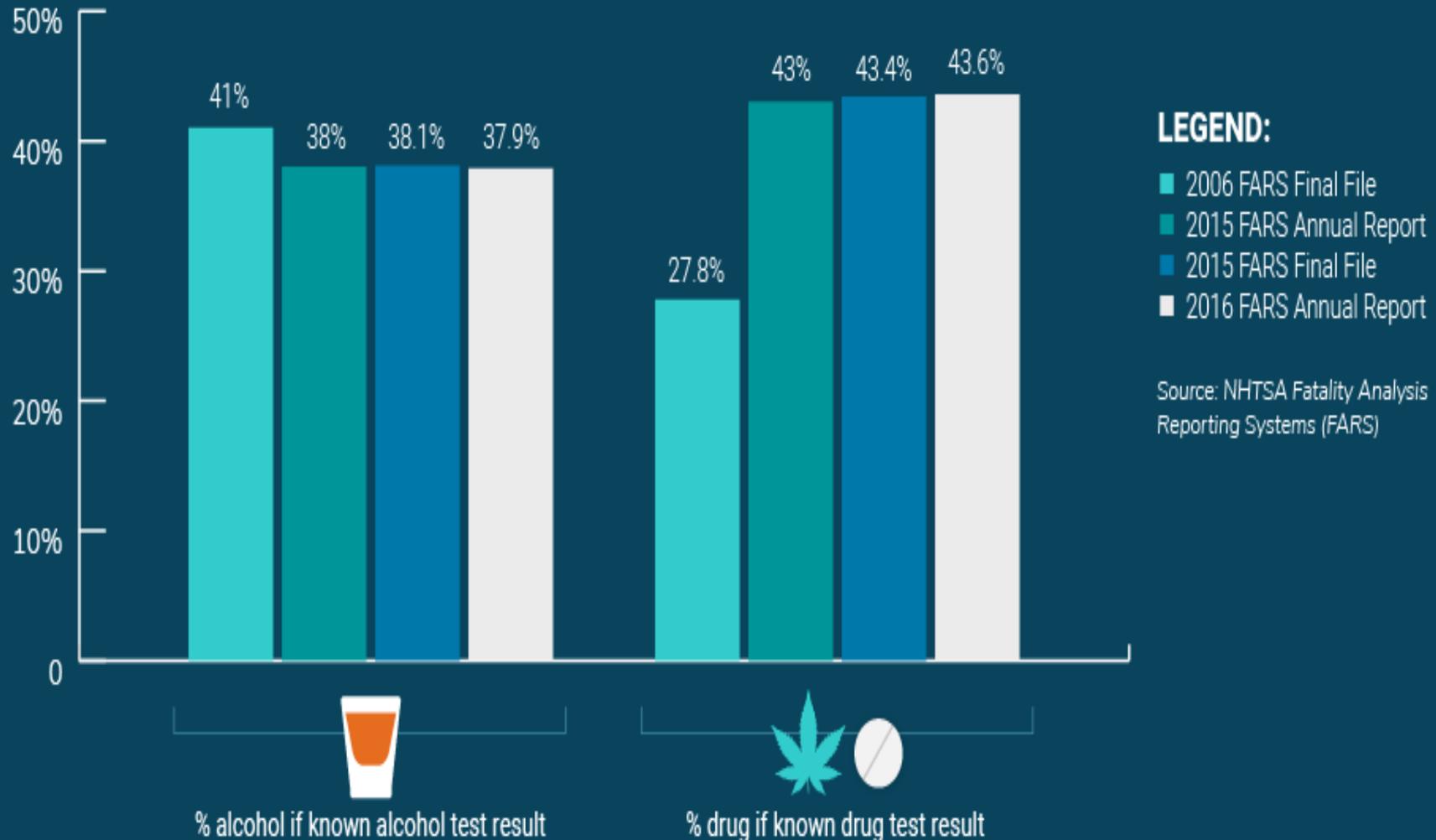
DUID- THE MAGNITUDE OF THE PROBLEM

Limitations in crash data

- **States and counties vary considerably in how they collect DUID data:**
 - How many drivers are tested?
 - What tests are used?
 - How are test results reported?
- **The rate at which states test drivers involved in fatal crashes ranges from less than 10% to over 90%.**
- **FARS data merely reflects drug presence; it does not identify**

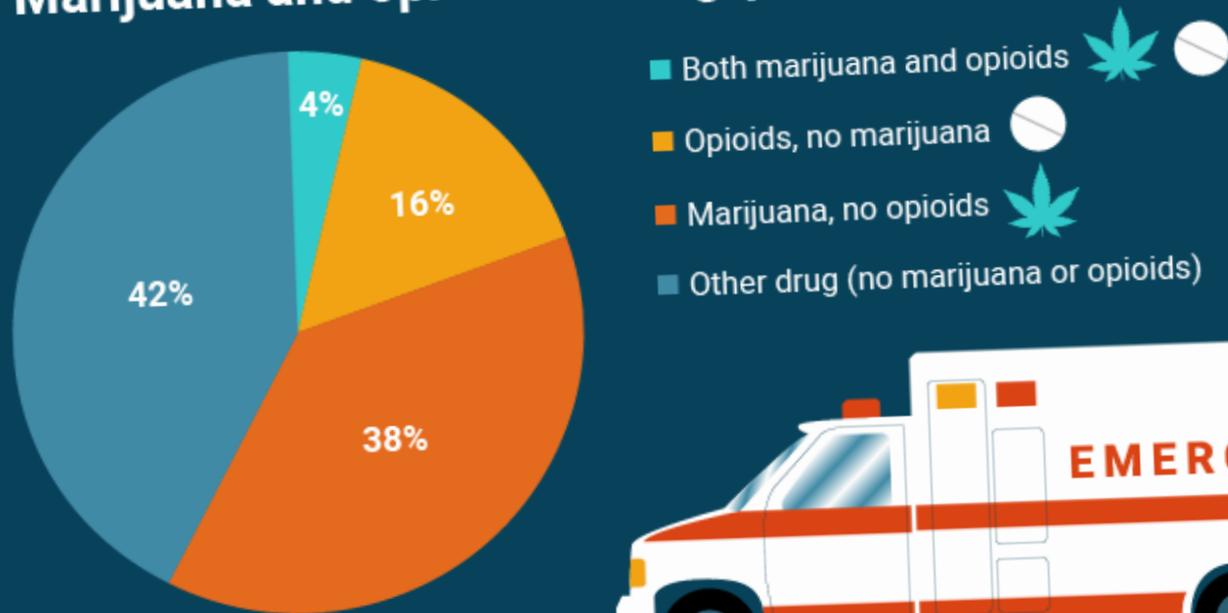


Drug and alcohol, percentage of fatally-injured drivers, known test results



Drug-Impaired Driving

Marijuana and opioids in drug-positive fatally-injured drivers,



Source: NHTSA FARS



Drug-Impaired Driving



RESPONSIBILITY.ORG

▲16% The number of alcohol-positive drivers* killed in crashes who also tested positive for drugs increased more than 16% from 2006 to 2016.

**With known test results for both drugs and alcohol.*

Source: NHTSA Fatality Analysis Reporting Systems (FARS)



Roadside data

- The most recent roadside survey data revealed an **increase in drugged driving**.
- Results from the NHTSA [National Roadside Survey](#) in 2013-2014 found that more than **22.5%** of night-time drivers tested positive for illegal, prescription, or OTC medications.
 - Comparatively, only 1.5% of night-time drivers tested positive for a BAC above the legal limit of .08.
 - This is much higher than the 16.3% of weekend nighttime drivers who tested positive in 2007.

Source: Berning et al. (2015). Results of the 2013-2014 National Roadside Survey of Alcohol and Drug Use by Drivers. DOT HS 812 118.

ROADSIDE SURVEYS:

	Weekday Days	Weekend Nights
Tested positive for some drug or medication	22.4%	22.5%
Illegal drugs, including marijuana	12.1%	15.2%
Medication	10.3%	7.3%
Marijuana	11.7%	12.6%
Alcohol	1.1%	8.3%

Source: Berning et al. (2015). Results of the 2013-2014 National Roadside Survey of Alcohol and Drug Use by Drivers. DOT HS 812 118.

Mixed findings?

After states legalized medical marijuana, traffic deaths fell

Study: Crash Claims Rise With Legalized Marijuana

In a **research letter** published Monday in the journal *JAMA Internal Medicine*, Canadian researchers looked at 25 years of data on fatal crashes in the U.S. They also compared the number of drivers involved in fatal crashes from 4:20 p.m. to midnight on April 20, and compared it to the same time frame one week earlier and a week later. The authors found that the risk of a fatal crash was 12% higher on April 20. Among drivers under age 21, the risk was 38% higher.

The challenge of polysubstance use



1+1=3

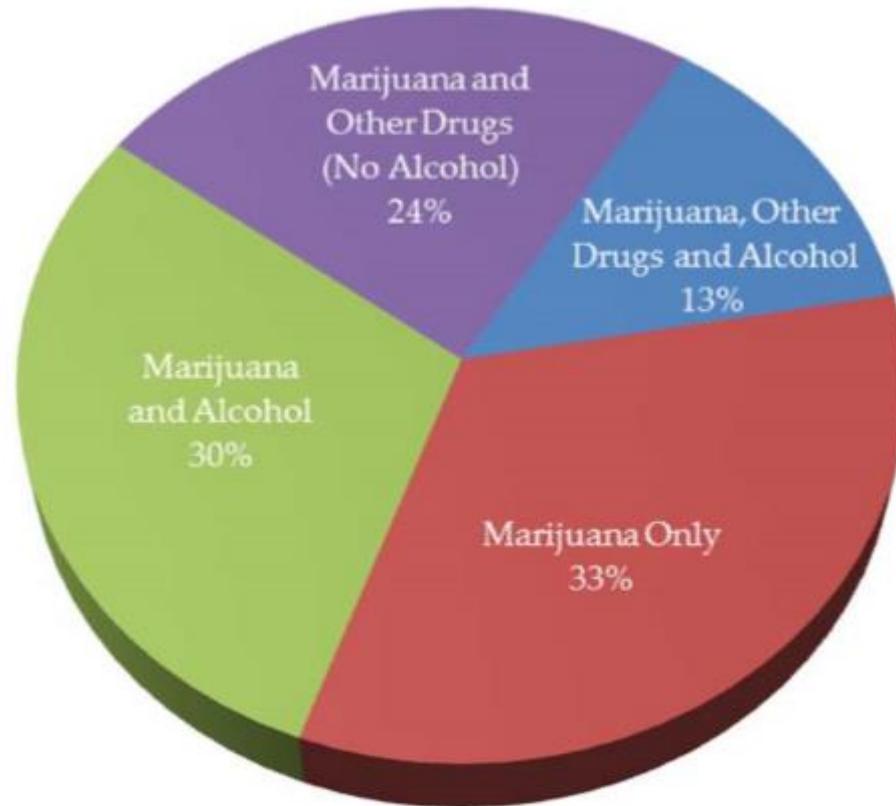
DUID crash risk

TABLE 3. CRASH RISK ASSOCIATED WITH DRUG USE IN EUROPEAN STUDIES

Risk level	Relative risk	Drug category
Slightly increased risk	1-3	marijuana
Medium increased risk	2-10	benzodiazepines cocaine opiods
Highly increased risk	5-30	amphetamines multiple drugs
Extremely increased risk	20-200	alcohol together with drugs

Shulze et al., 2012; Griffiths, 2014

Drug Combinations for Operators Positive for Marijuana*, 2015



*Toxicology results for all substances present in individuals who tested positive for marijuana

SOURCE: National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015

Capturing polysubstance use

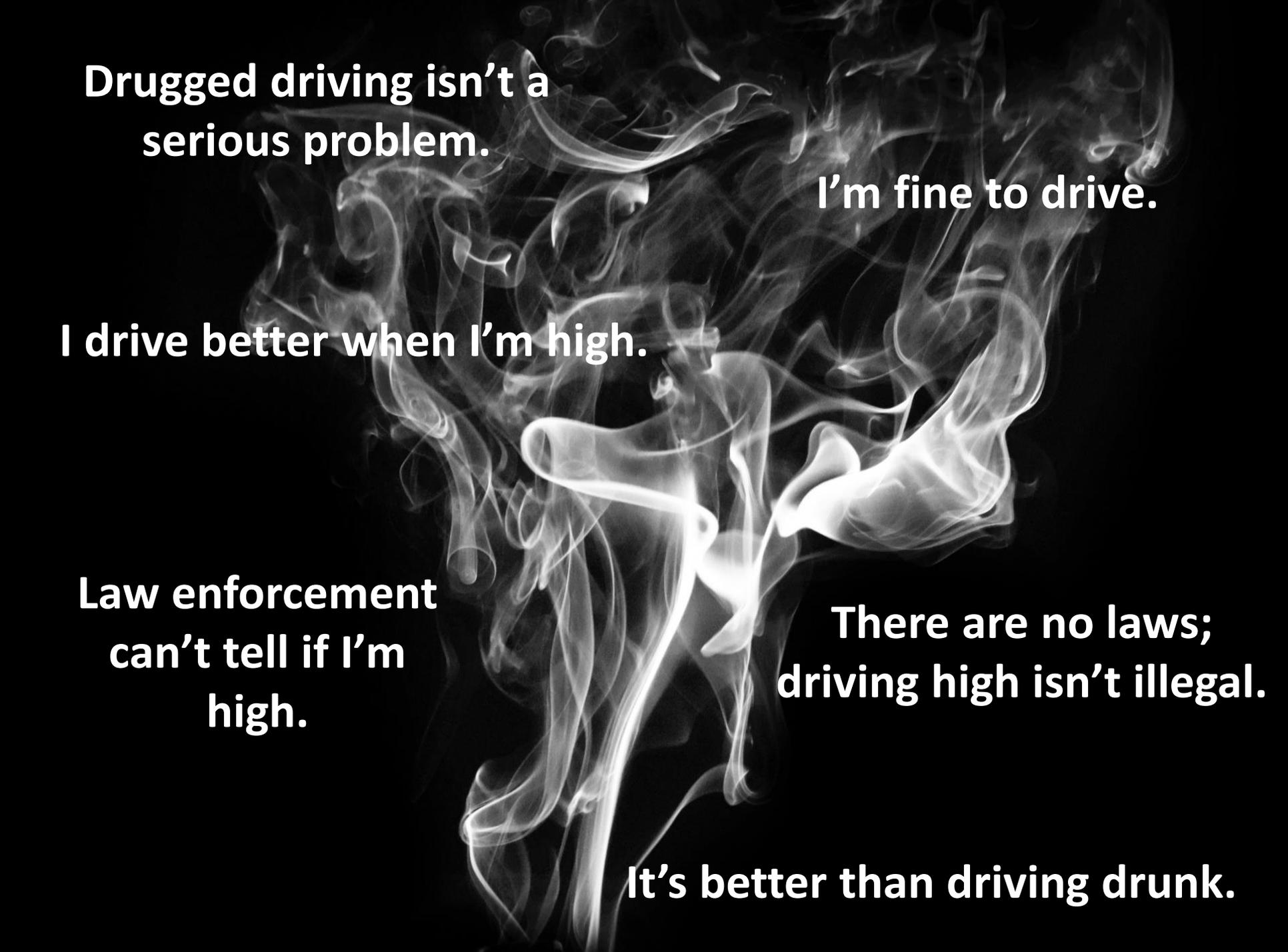
- In the Miami-Dade study (Logan et al., 2014), 39% of drivers who were found to have a BAC above .08 also tested positive for the presence of drugs.
- In the Dane County, WI study (Edwards et al., 2017), nearly 40% of the subjects with BACs exceeding .10 screened positive for one or more drug categories in both oral fluid and blood.
- These are individuals who likely would have only been prosecuted for drunk driving.

Why does this matter?





(MIS)PERCEPTIONS



**Drugged driving isn't a
serious problem.**

I'm fine to drive.

I drive better when I'm high.

**Law enforcement
can't tell if I'm
high.**

**There are no laws;
driving high isn't illegal.**

It's better than driving drunk.

Perceptions of risk

- According to a recent [Gallup poll](#):

Drinking, Drugs and Traffic Safety in U.S.

Do you think people driving impaired by each of the following substances is a very serious problem on the roads today, a somewhat serious problem or not much of a problem?

	Very serious %	Somewhat serious %	Not much of a problem %
Alcohol	79	18	2
Prescription painkillers	41	42	15
Marijuana	29	39	31
Prescription antidepressants	28	36	33

June 24-25, 2015

Perceptions of risk

- According to a recent Gallup poll:
 - Americans aged 18 to 29 (88%) are the most likely to say drinking and driving is a very serious problem.
 - This age group is also the least likely to consider people driving while impaired by marijuana to be a very serious problem (22%).
- Another Gallup poll that asked what impact **legalization** will have on traffic safety:

	A lot less safe	A little less safe	Not make much difference
June 24-25, 2015	30%	17%	50%

GALLUP®

Washington Roadside Survey

- Survey conducted by PIRE in June 2014 (prior to start date for recreational sales).
- Voluntary participation of drivers; included THC questionnaire and oral fluid sample.
- Of the 220 drivers who stated that they had used marijuana in the past year, 44% reported using marijuana within two hours prior to driving.
 - 62% felt that their recent marijuana use did not make any difference in their driving;
 - 25% felt that recent marijuana use made their driving better;
 - Only 3% felt that recent marijuana use made their driving worse.



EFFECTS OF DRUGS ON DRIVING

SIGNS AND SYMPTOMS OF MJ USAGE

- Relaxation
- Euphoria
- Relaxed Inhibitions
- Disorientation
- Altered time & distance perception
- Lack of Concentration
- Impaired Memory & comprehension
- Jumbled thought formation
- Drowsiness
- Mood changes, including panic and paranoia with high dose
- Heightened senses
- Body tremors (Major muscle groups: quads, glutes, and abs)
- Eyelid tremors
- Red, Bloodshot eyes
- Possible GVM or green coating on tongue
- Dilated pupils

Cannabis and driving

- **Poor attention to tasks**
- **Time and distance perception**
- **Slower braking/reaction time**
- **Poor speed maintenance**
- **Poor lane tracking/more steering corrections**
- **Drivers impaired by marijuana may compensate by driving slower and increasing following distance**
- **Level of impairment increases with dose**



Sources: Compton and Berning, 2015; Hartman and Huestis, 2013; Kelly-Baker, 2014.

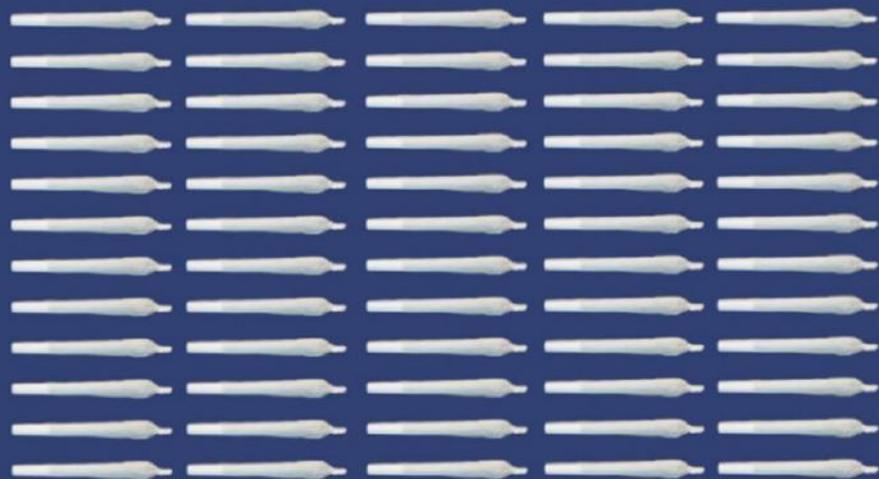
Class of drug	Effects on driving
Cannabis	Poor attention to tasks; time and distance perception; slower reaction time/slower braking; poor lane tracking/more steering corrections; poor speed maintenance
Depressants	Slower reaction time; poor attention to task; poor lane positioning; poor speed maintenance; fail to obey traffic signs
Dissociative anesthetics	Poor attention to task; poor reaction time
Hallucinogens	Slower reaction time; perceive things that are not there and react to them
Inhalants	Slower reaction time; fall asleep at wheel
Narcotic analgesics	Slower reaction time; poor lane positioning; drive slowly; fall asleep at wheel
Stimulants	May increase reaction time; may increase erratic/aggressive driving; possible rebound effect (sleepiness)



DRUG-IMPAIRED DRIVING POLICYAND CHALLENGES



1 OUNCE



60 JOINTS

Imagine 15 of these plants



Drugged driving is more complicated than drunk driving.

DRUGGED DRIVING

DRUNK DRIVING

Number: Hundreds of drugs

Alcohol is alcohol

Data on Use by Drivers & Crashes: Limited

Abundant

Use by Drivers: Increasing

Decreasing

Impairment: Varies by type

Well-documented

Crash Risk: Varies by type

Precise

Beliefs & Attitudes: No strong attitudes – public indifferent

Socially unacceptable



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How many drugs are out there?

- There is an ever-expanding list of drugs and new substances are continually being developed.
 - Since the mid-2000s, there has been a proliferation of new psychoactive drugs.
- **Designer drugs:** a reformulation of existing chemical compounds.
 - Increase potency; prolong effects; make detection more difficult; make an illegal drug legal
- **Common types:** synthetic cannabinoids (K2/spice), synthetic cathinones (bath salts), opiate derivatives, reformulated pharmaceuticals, new hallucinogens and stimulants.
- **DUID testing implications.**



Presence vs. Impairment

- **Relationship between a drug's presence in the body and its impairing effects is complex and not well understood.**
- **Presence of a drug \neq impairment**
 - Some drugs/metabolites may remain in the body for days or weeks after initial impairment has dissipated.
 - Individuals differ considerably in the rate of absorption, distribution, action, and elimination of drugs.
 - Some people are more sensitive to the effects of drugs, particularly first-time or infrequent users.
 - Wide ranges of drug concentrations in different individuals produce similar levels of impairment in experimental situations.

Presence vs. Impairment: Marijuana

- **Marijuana metabolites can remain in the body for 30 days +**
- **THC concentrations fall to about 60% of their peak within 15 minutes after smoking; 20% of their peak 30 minutes after smoking; impairment can last 2-4 hours.**
- **There is no DUID equivalent to .08 BAC.**
 - It is currently impossible to define DUID impairment with an illegal limit as drug concentration levels cannot be reliably equated with a specific degree of driver impairment.



Method of ingestion matters!



MJ Ingestion

Inhaling - Pulmonary



Oral - Digestive



Trans mucosal – sublingual, intranasal, rectal, ocular



Transdermal



Edibles

No More of These...



Stoner Things

COLORADO EDIBLES GET A NEW LOOK

10 mg THC
serving



CONSUMING CAN CAUSE CRASHING.



It takes up to two hours for an edible to affect you.
Don't be behind the wheel when your high hits.

IF YOU'RE HIGH, DON'T DRIVE.



COLORADO
Department of
Transportation

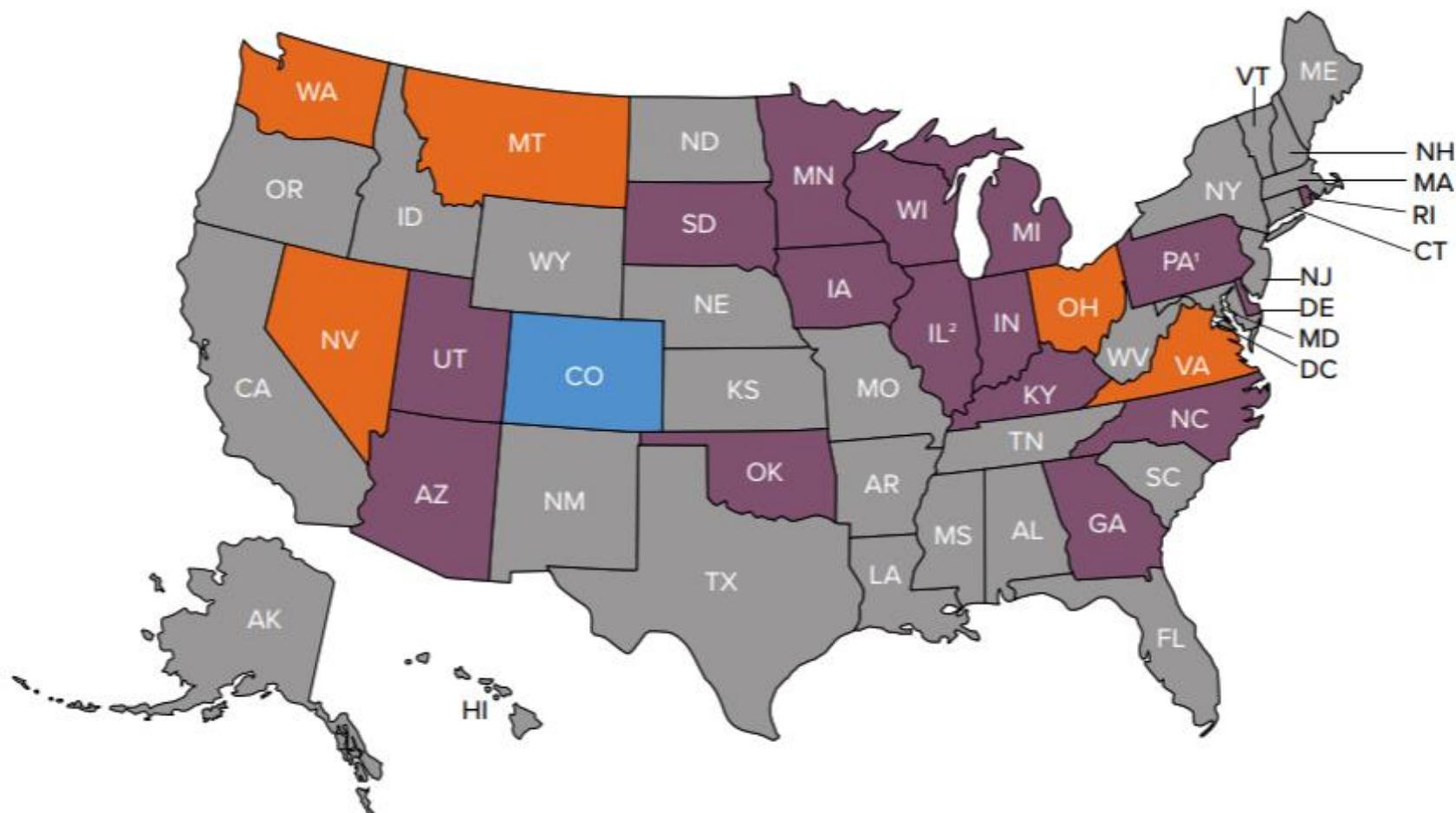


MOVING TOWARDS
ZERO
DEATHS

STATE BY STATE:

DUID ZT or *Per se* for Some Drugs

AS OF APRIL 2017



Click on a color to highlight the states in that category

- *Per se* limit greater than zero for some drugs
- Zero tolerance for some drugs
- Reasonable inference law with a limit greater than zero for THC

1 Pennsylvania has both a zero tolerance law for some drugs and a 1 ng *per se* law for THC. Pennsylvania's 1 ng *per se* law is in effect a zero tolerance law*.

2 Illinois has both a zero tolerance law for some drugs and a 5 ng *per se* law for THC.

Marijuana DUID statutes

- **Zero tolerance for THC or metabolites: 8 states**
 - Arizona, Delaware, Georgia, Indiana, Oklahoma, Rhode Island, South Dakota,* and Utah
- **Zero tolerance for THC only: 3 states**
 - Iowa, Michigan, and Wisconsin
- **Per se limits for THC: 7 states**
 - Pennsylvania (1ng); Nevada and Ohio (2ng); West Virginia (3ng); Illinois, Montana, and Washington (5ng)
- **Reasonable inference THC law: Colorado (5ng)**
- **Marijuana exemption in zero tolerance or per se laws: 3 states**
 - Minnesota, North Carolina, Virginia



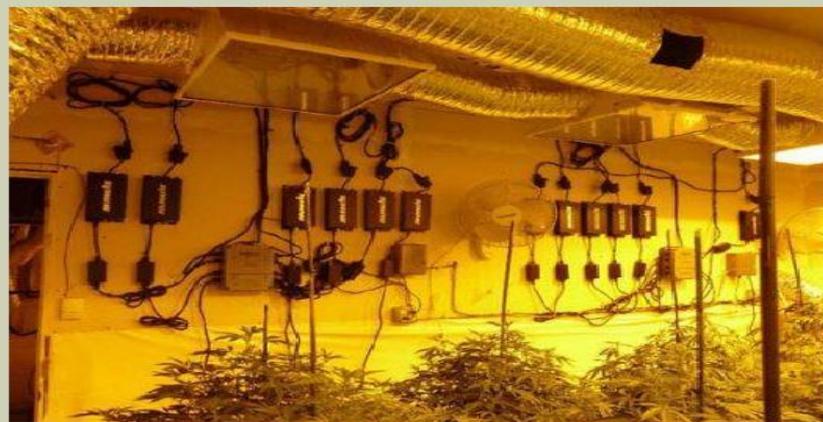
DUID ENFORCEMENT

What about this scenario?



*Tobacco or
THC?*

Does this look like a MJ grow house?



Traditional impaired driving enforcement

- DUI is the **ONLY** crime where the police stop investigating once they obtain a minimum amount of evidence according to standard operating procedure.
- Current protocols prevent drug testing once a suspect registers an illegal BAC limit (.08>).
- Implications of this practice:
 - Hinders the ability to measure the true magnitude of the drug-impaired driving problem is unknown.
 - Many DUI arrests are **inaccurately attributed to alcohol alone**.

Enforcement challenges

- **Many officers are not trained to identify the signs and symptoms of drivers impaired by drugs.**
- **Delays in collecting a chemical sample may allow drugs to metabolize; the driver's concentration levels may not reflect levels at the time of arrest.**
 - Warrant requirements for blood draws.
- **Drug testing is expensive and time-consuming (lab backlogs).**



DUID detection training

- A variety of different detection strategies are available to law enforcement to identify drug-impaired drivers:
 - SFST academy and refresher training
 - Advanced Roadside Impaired Driving Enforcement (ARIDE) program
 - Drug Evaluation and Classification Program (DEC)



Drug Recognition Experts (DREs)

- The DEC program was established in 1980 by the LAPD.
- Officers are required to go through three phases of training totaling more than 100hrs before they are eligible to receive DRE field certification.
 - DRE Pre-School: 16hrs of classroom training
 - DRE School: 56hrs of classroom training
 - DRE Field Certification: approximately 80hrs
 - A total of **152 hours of training**
- DREs must be recertified every two years (they must perform a minimum of four evaluations and attend eight hours of training in the process)

Drug Recognition Experts (DREs)

- **DREs use a standardized 12-step protocol that allows them to determine whether a suspect:**
 - is impaired;
 - if that impairment is caused by drugs or can be attributed to a medical condition; and,
 - the category of drug(s) that are the cause of the impairment (seven categories).
- **Today, all 50 states, Canada, and the United Kingdom participate in the DEC program.**
 - But not every jurisdiction in the country has an officer trained as a DRE; often an issue of resources.
- For more information, visit www.decp.org

The DRE 12 STEP PROCESS

1. Breath Alcohol Test
2. Interview of the 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 Opinions of the Evaluator
12. Toxicological Examination

Prosecution issues

- Many prosecutors and judges are not familiar with drugged driving cases.
- Due to laboratory backlogs, drug test results may not be available when a DUI case goes to trial.
- Issues with drug concentrations in the blood; samples not collected proximal to the time of driving.
- Prosecution can be difficult because judges expect a specific drug concentration; they may not accept DRE evidence of impairment.
- Need to overcome jury perceptions with respect to marijuana harm and performance on SFSTs.



Officers need more tools

- Not all officers receive specialized training.
- Availability of DREs is limited.
- Polysubstance impaired driving is becoming increasingly common.
- Drugs metabolize quickly.
- Warrants take time.





ORAL FLUID TESTING

DUID testing

Testing method	Location	Pros	Cons
Oral fluid/saliva	Roadside (screening)	<ul style="list-style-type: none">- Identifies presence of recent use- Easy to administer- Inexpensive- Results in less than five minutes	<ul style="list-style-type: none">- Quality of kits varies- Not overly sensitive, especially for cannabis- Not specific; generally test for drug classes- Short window of detection
Blood	Laboratory (evidentiary)	<ul style="list-style-type: none">- 'Gold standard'- Conclusive, sensitive, and specific	<ul style="list-style-type: none">- Short window of detection- Expensive (e.g., \$300 in CO)- Requires trained individual to conduct blood draw
Urine	Laboratory (evidentiary)	<ul style="list-style-type: none">- Long window of detection- Conclusive, sensitive, and specific	<ul style="list-style-type: none">- Officers must observe suspects- Expensive
Oral fluid/saliva	Laboratory (evidentiary)	<ul style="list-style-type: none">- Conclusive, sensitive, and specific	<ul style="list-style-type: none">- Short window of detection- Very expensive- Few qualified labs

Oral fluid technology



Future testing methods



Cannabis breathalyzers

Intelligent fingerprinting



— PROBATION —



SUPERVISING THE DRUG-IMPAIRED DRIVER



4,600,000 individuals under community supervision in 2017

15% of this probation population have been convicted of DWIs

8% of the probation population have been convicted of multiple DWIs

Approximately two thirds of individuals under community supervision are drug or alcohol involved

What does the problem look like in Minnesota?

- **Assess your state's drugged driving issues**
 - What drugs are you most commonly seeing (fatal crashes, arrested drivers)?
 - Are there regional differences?
 - Are there high-risk segments of the population?
- **Collect baseline data**
 - Test more drivers for drugs
 - Track DUID and DUI separately in crash, arrest, court data for better analysis



What tools are available?

- **Assessment**
- **Supervision**
- **Technology**
- **Testing**



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.

Major Risk Areas of DUI Recidivism

1. Prior involvement in the justice system specifically related to impaired driving
2. Prior non-DWI involvement in the justice system
3. Prior involvement with alcohol and other drugs (AOD)
4. Mental health and mood adjustment problems
5. Resistance to and non-compliance with current and past involvement in the justice system

Are risk factors the same for drugged drivers?

The Big Four

Criminogenic Need	Response
History of anti-social behavior	Build non-criminal alternative behaviors to risky situations
Anti-social personality	Build problem solving, self management, anger management, and coping skills
Anti-social cognition	Reduce anti-social cognition, recognize risky thinking and feelings, adopt an alternative identity
Anti-social companions	Reduce association with criminals, enhance contact with pro-social

Source: Ed Latessa, Ph.D.

The Next Four

Criminogenic Need	Response
Family and/or marital	Reduce conflict, build positive relationships and communication, enhance monitoring/supervision
Substance abuse	Reduce usage, reduce the supports for abuse behavior, enhance alternatives to abuse
School and/or work	Enhance performance rewards and satisfaction
Leisure and/or recreation	Enhance involvement and satisfaction in pro-social activities

Source: Ed Latessa, Ph.D.

Assessments

- **ADS** (Alcohol Dependence Scale)
- **ASUDS-R** (Alcohol Substance Use and Driving Survey – Revised)
- **ASI** (Alcohol Severity Index)
- **AUDIT** (Alcohol Use Disorders Identification Test)
- **IDTS** (Inventory Drug-Taking Situations)
- **DAST** (Drug Abuse Screening Test)
- **LSI-R** (Level of Service Inventory-Revised)
- **MAST** (Michigan Alcoholism Screening Test)
- **SASSI** (Substance Abuse Subtle Screening Inventory)
- **RIASI** (Research Institute on Addiction Self Inventory)
- **IDA** (Impaired Driver Assessment)
- **CARS** (Computerized Assessment and Referral System)

Assessments should drive decision-making

- Using traditional assessment instruments, DUI/DUID offenders are commonly identified as low risk due to a lack of criminogenic factors.
- DUI/DUID offenders often have unique needs and are resistant to change on account of limited insight into their behavior.
- Recognition that specialized instruments should be created to accurately assess risk and needs of impaired drivers.
- Validated risk and needs assessment instruments are available – some specific to DUI population (e.g., IDA; CARS).



Where
should we
devote
our
resources?



With impaired drivers, don't assume!

**The drunk driver before you could actually be a
polysubstance user**

PROS | CONS



Testing considerations

- Test for both alcohol and drugs
- Broad testing panel
- Mix up your protocol
- Are there ways to capture synthetic drugs?
- Pay attention to technological advances
- Resources



**Could apply to both DUI/DUID offenders...
you never know if your DUI client is actually a
polysubstance-impaired driver.**

Broad Field Testing

TASC recommends testing for-

Alcohol	MDMA	And in a perfect world,
Amphetamine	Methadone	
Barbiturates	Opiates	Ketamine
Benzodiazepines	Oxycodone	Synthetic Cannabinoids (Spice/K2)
Buprenorphine	Phencyclidine	Synthetic Cathinones (Bath Salts)
Cocaine	Propoxyphene	Tramadol
EtG	THC	
Fentanyl	Tramadol	
Heroin,		



Important Considerations in Treatment!

- How do you know if the treatment approach is an EBP model?
- Treatment is manual-based
 - Specific to a particular intervention
 - Beware of counterfeits
 - Not every intervention that is manualized is EBP
 - IOP VS. Residential Treatment
- Are you including family?
- Are you paying attention to your clients physical condition?
 - Pain management
 - Insomnia

AA or N/A?

- Voluntary
- Coerced
- Options



Is Treatment Effective?

- Many do not comply
- Many relapse
- There is no cure
- Rates are similar to other diseases
- I.E. diabetes, heart disease, obesity

Rates of Medication Adherence over a 6-12 Month Period

- **Bipolar disorder**
 - **Schizophrenia**
 - **Cardiovascular**
 - **Osteoporosis**
- **34% to 80%**
 - **11% to 80%**
 - **Beta 46%**
 - **Cholesterol 44%**
 - **43% to 53%**

How Can We Measure The Efficacy of Addiction Treatment?

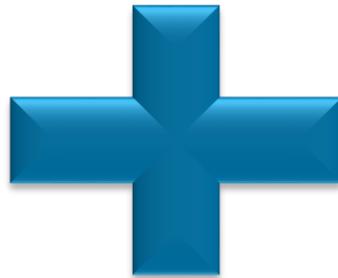
- Abstinence from the substance of abuse at 6 months? 12 months? One year?
- Improvement in psychosocial variables?
(Work, school, relationships)
- Improvement in physical health?
- Improvement in mental health?



*Where do we
place these
people?*



Focus on the behavior – it's more than just drug use!



So What Could Possibly Go Wrong?



Report authored by Dr. Jim Hedlund

Recommendations formed by
an expert panel consisting of
representatives from:

- NHTSA
- ONDCP
- GHSA
- National Traffic Law Center
- AAMVA
- Colorado HSO
- WTSC
- Institute for Behavior and Health
- Responsibility.org



Saving lives
through research
and education



Prevalence of Involvement in Washington State

May 2016

801 14th Street, NW, Suite 2011

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through research
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An Evaluation of Drivers' Perceptions Under the Influence

May 2016

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Advanced Data Analysis Synthesis of Recommendations

March 2016

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Cannabis Use among Drivers Suspected of Driving Under the Influence or Involved in Collisions: Analysis of Washington State Patrol Data

May 2016



801 14th Street, NW, Suite 2011 Washington, DC 20005 | AAASFoundation.org | 202-438-5944

AAA studies: <https://www.aaafoundation.org/impaired-driving-and-cannabis>



Drug-Impaired Driving

Marijuana and Opioids Raise Critical Issues for States



IN PARTNERSHIP WITH



RESPONSIBILITY.ORG





QUESTIONS?

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