



TOXICOLOGY

SAFER ROADS ARE IN YOUR HANDS

COMPREHENSIVE ANSWERS

ADVANCING ROADSIDE DRUG TESTING

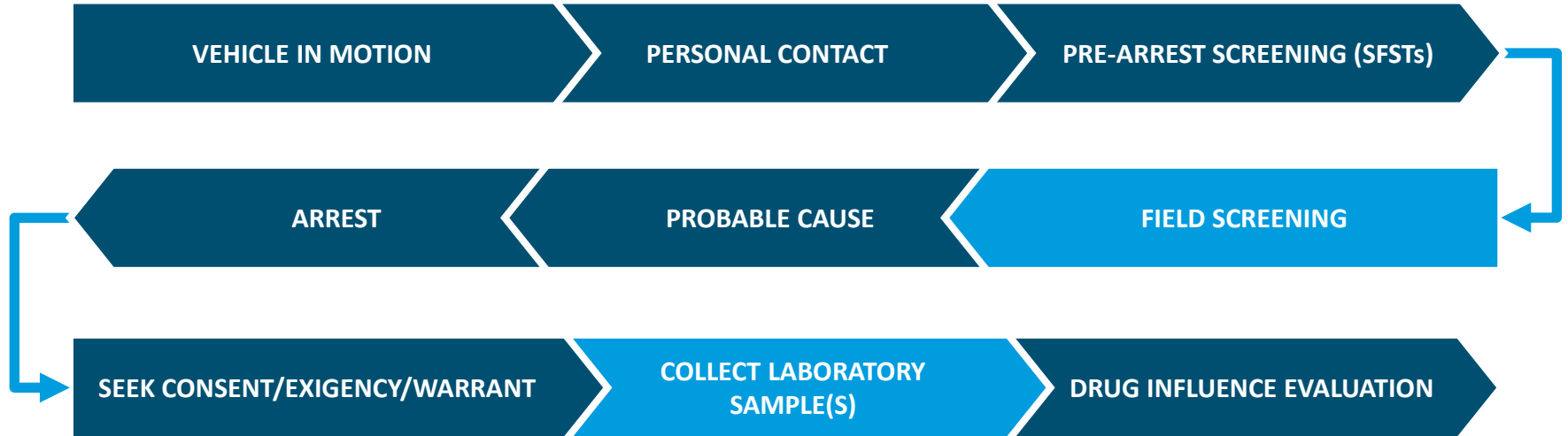
NCSL TRAFFIC SAFETY PRE-CONFERENCE
JULY 31, 2022

THC
25NG/ML

MAMP
50NG/ML

COC
30NG/ML

Impaired driving investigation: Oral fluid screening



- **Screening** = qualitative result (+/-); can aid in establishing probable cause; not admitted in court as evidence
- **Confirmation** = quantitative result (ng level); analysis performed in a forensic laboratory to confirm presence of drug(s) in body; admissible as evidence in court

SOURCES

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Advantages of roadside drug testing

Roadside drug testing programs that utilize oral fluid screening have multiple benefits:

- Aid the investigative process (e.g., help establish probable cause)
- Enhance public safety
- Support strategic use/allocation of resources
- Create general deterrence



Oral fluid screening technology

- Analyzer devices use lateral flow immunoassay technology.
- Simple and quick collection process; subject performs oral fluid collection using swab.
- Cartridges inserted into instruments analyze oral fluid sample.
- Most devices test for common drugs of abuse (e.g., cannabis (THC), cocaine, amphetamines, methamphetamines, opioids, benzodiazepines).
- Devices use pre-set cut-off levels for each drug.
- Rapid screening results returned in minutes.
- Officers do not have to interpret results - analyzer provides qualitative result for each drug (objective measure).
- Ability to print results (e.g., to attach to arrest reports); technology can store test results (including date/time).
- Technology has built-in quality checks and procedures.

Benefits of oral fluid screening technology

- Easy and rapid sample collection
- Portability (ideal for roadside environment)
- Minimally invasive; comparable to a preliminary breath test
- Ability to collect sample proximal to the time of a traffic stop
- Active drug detection shows recent use
- Gender-neutral collections
- Medical personnel are not required for sample collection
- Real-time information to support decision-making
- Results can support search warrant requests for evidential samples (e.g., blood)
- Ability to identify polysubstance-impaired drivers
- Can lead to creation of ALS/ALR process for drug-impaired drivers

SoToxa: Drugs and cut-offs

- Cut-off level - the decision point which differentiates a test result as being either positive or negative.
- The cut-off for a test is given as a defined drug concentration.
- For drug screening tests, a cut-off is chosen that will minimize the number of false positive results.

DRUG CUT-OFF LEVELS

DRUG GROUP	TARGET COMPOUND	CUT-OFF (ng/mL)
Amphetamine	(S) Amphetamine	50
Benzodiazepine	Temazepam	20
Cannabis	Delta-9-THC	25
Cocaine	Benzoylcegonine	30
Methamphetamine	(S) Methamphetamine	50
Opiates	Morphine	40

Current policy landscape: Oral fluid authorization

- Oral fluid can be authorized for screening, evidential testing, or both.
- 23 states authorize oral fluid testing in statute in some form (approaches include: implied consent, preliminary testing, pilot laws, etc.).
- Oral fluid pilots have been completed in numerous jurisdictions.
- Shift towards conducting feasibility studies and implementing permanent programs.

ORAL FLUID AUTHORIZED TO DETECT DRUGS?

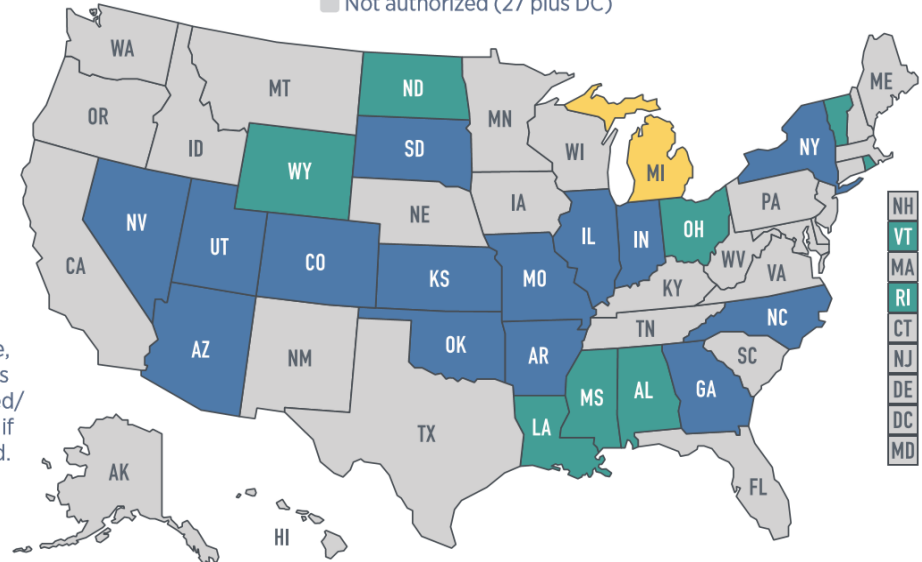
October 2020

■ Covered by implied consent law (14)

■ Authorized by impaired driving statute; implied consent N/A (8)

■ Authorized for state pilot program (1)

■ Not authorized (27 plus DC)



In practice, oral fluid is not collected/used even if authorized.

SOURCES

AAA Foundation for Traffic Safety (2020). Using Oral Fluid to Detect Drugs Handout. Available [online](#).



Legalization lessons

- Traffic safety must be considered when debating legalization.
- States should take a proactive and comprehensive approach to address drug and polysubstance-impaired driving.
- Roadside drug testing can provide better insight into the magnitude and characteristics of the DUID problem to inform decision-making.
- Canadian example - roadside oral fluid screening was authorized in advance of legalization to protect public safety and create general deterrence.

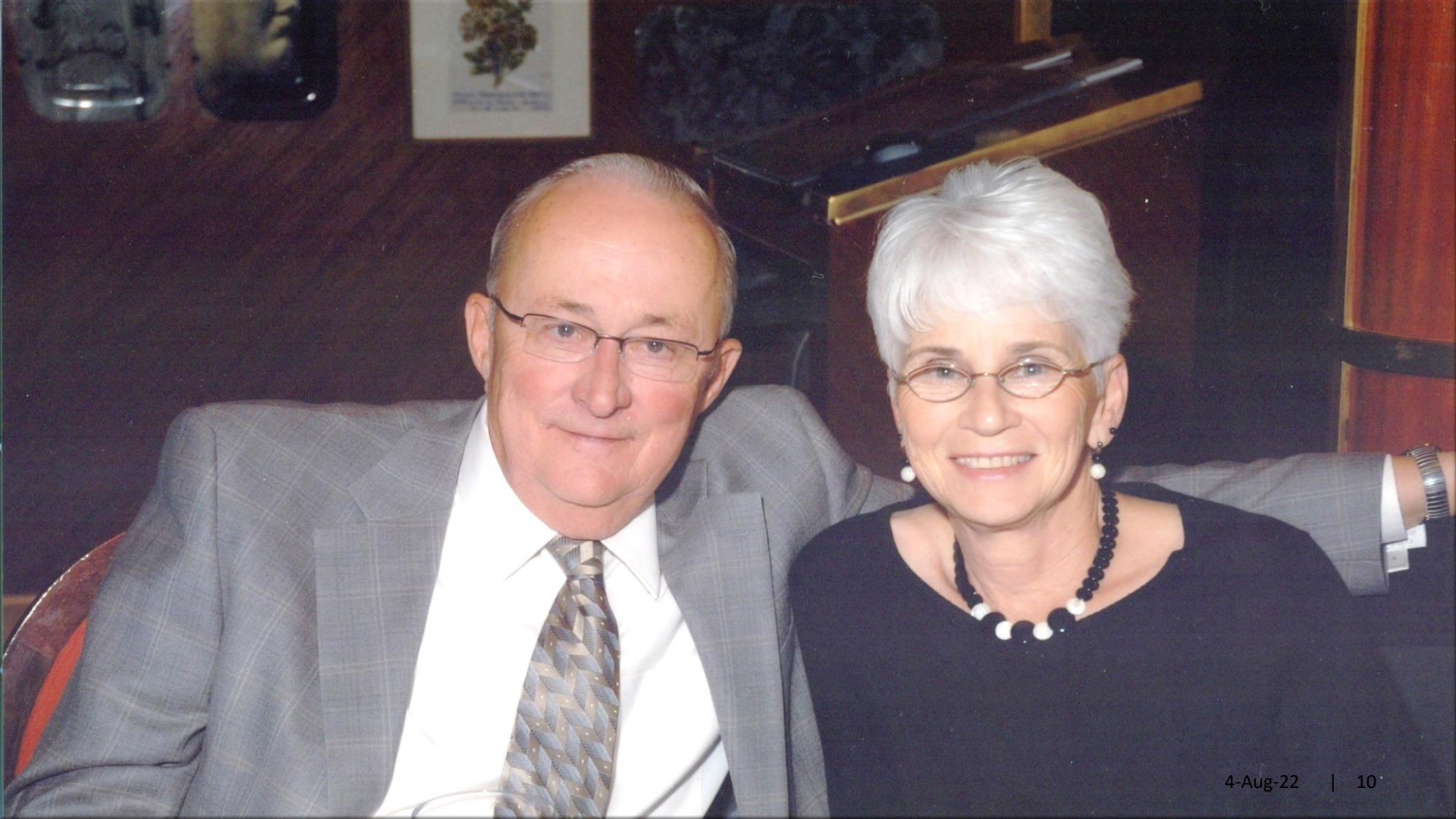
Roadside programs: Pathways to implementation

Established via legislation and funded by the **STATE LEGISLATURE**.
(e.g., Michigan)

Established and funded by a **STATE HIGHWAY SAFETY OFFICE** (program implemented by law enforcement agencies).
(e.g., Indiana)

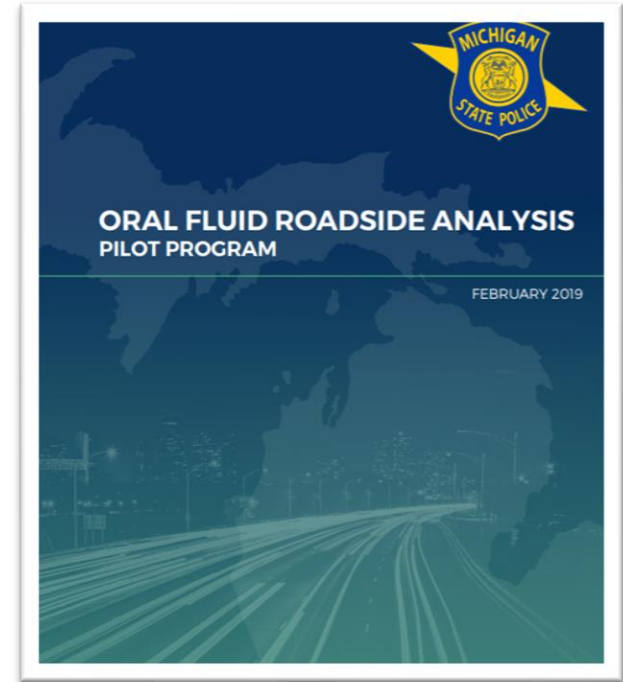
Launched by a **LAW ENFORCEMENT AGENCY**.
(e.g., California, Illinois)

Established by a **STATE AGENCY** (e.g., forensic laboratory) in coordination with law enforcement agencies and other partners.
(e.g., Alabama)



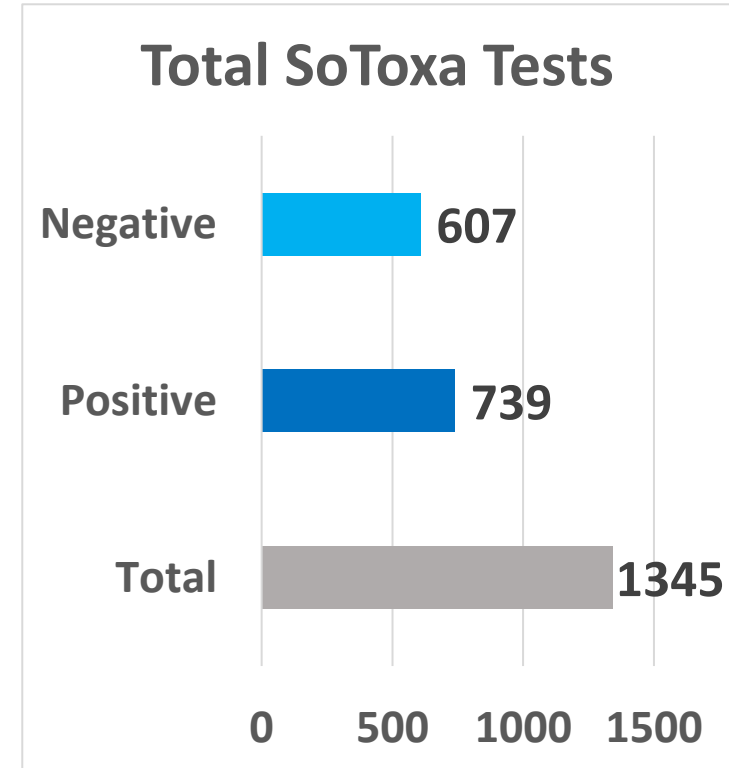
Michigan pilot findings

- Michigan State Police (MSP) pilot study concluded:
 - Oral fluid has been found to be ***accurate for purposes of preliminary roadside testing.***
 - It is one of many tools that officers can use during impaired driving investigations.
 - SoToxa is easy to use, requires minimum training, and provides a result within 5 minutes after collection of the sample.
- Legislation is pending that would authorize preliminary oral fluid screening in Michigan, establishing parity with preliminary breath testing.
- Michigan pilot data used to establish a permanent statewide program in Indiana.



Indiana: Benchmark for success

- Program launched in November 2020 with phased rollout.
- Statewide implementation at local level; ARIDE-trained officers.
- Significant indicators of success:
 - Increase in identification of drug-impaired drivers including drivers under the influence of multiple drugs.
 - Increase in DRE drug evaluations.
 - Increase in drug submissions to forensic laboratory.
 - Increase in officer engagement with training (all-time high participation in ARIDE trainings).



Indiana: Benchmark for success

- Significant increase in submissions to lab for drug analysis:
 - **61** of **92** (78%) of counties increased submissions by **15%** or more.
 - **42** of **92** (46%) of counties increased submissions by **50%** or more.
 - **71.1%** of submissions positive for one or more drugs (6,246 vs. 6,720).
 - THC positives increased from **40.4%** in 2019 to **53.4%** in 2021 (+13%).



Contact information

**Erin
Holmes**

Director,
Global Road Safety
Abbott

erin.holmes@abbott.com



Abbott