Doing All We Can to Address Drug-Impaired Driving: Data and Beyond

Several states have deployed hundreds of SoToxa™ analyzers as an Oral Fluid Field Screening (OFFS) instrument to facilitate the detection of drugged drivers in their states. The National Highway Traffic Safety Administration (NHTSA) indicated that the feasibility of collecting samples in proximity to the crash event continues to be a challenge; however, oral fluid collection at the scene of a crash event is efficient and reliable. Many substances are rapidly metabolized by the body following consumption, with cannabis having an increased presence in toxicology samples across the country. The active substance in cannabis, delta-9-tetrahydrocannabinol (THC), drops by over 80% within 90 minutes of smoking [1], creating an urgency to close the gap between the time of consumption and collection. By utilizing data from oral fluid screening, law enforcement officials can prioritize samples in order of acquisition upon arrival in the laboratory.

The completeness of reporting drivers involved in fatal crashes who were under the influence of drugs is poor. In a report submitted to Congress earlier this year, NHTSA found that reporting the testing of fatally injured drivers remains challenging and significantly varies by state. Citing 2019 FARS (Fatality Analysis Reporting System) data, the completeness of reporting by states varies from more than 90% to less than 10%, with an average of 60% for all states[2]. Multiple agencies, including the U.S. Government Accountability Office (GAO) and the National Transportation Safety Board (NTSB), stated that the lack of and unreliability of data are a problem. By using oral fluid, the data sample and subsequent results can be collected at the closest proximity to the driving event.

NHTSA recognized the limitations of the FARS framework and added new data fields in 2022 to include drug specimen, drug test result (for all substances within panel) and drug test status. Further efforts to increase the completeness of data were instituted in 2023 to designate drug testing methods (i.e., screening vs. confirmatory) and actual quantities of drugs detected. Oral fluid is deemed an acceptable sample for reporting and identified as such in the 2022 Edition of the FARS/CRSS Coding and Validation Manual .[4]

North Dakota recently completed an evaluation of SoToxa™ as an OFFS instrument used at the scene of impaired driving incidents. The study found that oral fluid had an accuracy rate of 94% for cannabis when compared with blood. SoToxa™ provides analysis of oral fluid for amphetamines, methamphetamine, benzodiazepines, cocaine, opioids and cannabis. North Dakota found that between 2020 and 2023, screening for this panel of drugs represented **80%** of the top ten (10) drugs detected by the laboratory in blood. With the addition of fentanyl, this panel would represent 90% of the top ten (10) drugs identified in the blood by the laboratory.[6]

NHTSA has cited oral fluid for detecting the presence of drugs as a solution as early as 2009. Oral fluid was utilized in the 2007 National Roadside Survey of Alcohol and Drug Use by Drivers and will be the only testing device used for the next iteration of this survey. The NTSB has been advocating for states to adopt oral fluid for more than a decade and "recommends that … [states] modify their impaired driving laws to allow for oral fluid collection, screening and testing for the detection of drug use by drivers."[3]

Indiana embraced OFFS in 2020 and continues to see improvement not only in the detection of impaired drivers, but also in the overall reduction of fatal crashes. From 2019 to 2022, laboratory submissions increased 14% and resulted in a corresponding 14% increase in cannabis identifications in blood. From 2018 to 2022, the average number of officers completing ARIDE (Advanced Roadside Impaired Driving

Education) for training in drug-impaired driving increased more than 100% from 116 in 2017 to 393 and 367 in 2022 and 2023, respectively.[6,7]

North Dakota and Indiana clearly confirm the positive impact OFFS has on detecting drivers under the influence of drugs. For Indiana, "in the nearly three years since implementation [of its oral fluid program] more than 3,000 tests have been performed. Roadside oral fluid testing [is] accepted by the law enforcement community… [and] the number of drug influence evaluations has increased in correlation with the use of roadside oral fluid testing."[8] Indiana reduced overall fatalities by 6.2% from 953 in 2021 to 894 in 2023. At the 2024 GHSA Annual Meeting held last September in Indianapolis, the Indiana Criminal Justice Institute reported an ***8% decrease*** from 2022 to 2023, and trending at a ***17% decrease*** from 2022 to 2024. Marijuana continues to maintain a regular number of top-reported drug categories present in sample analyses completed by states.

Utilizing data from oral fluid screening, samples can be prioritized at accessioning in the laboratory prior to utilizing laboratory screening techniques such as ELISA, LC-TOF, or GC-QQQ-MS, to improve efficiency in prioritizing samples for drug testing. Data-driven is a core requirement for any program, and measurable outcomes are how we measure the effectiveness of implemented programs. OFFS can assist states in making quantifiable and measurable improvement in the reporting of driver drug testing in the event of a fatal crash. More importantly, an effective program that combines training and tools can produce the most measurable outcome of all, saving lives. The solution for both these challenges is implementable today; not equipping law enforcement with this tool exacerbates the potential loss of life on U.S. roads.

References

[1]Compton, R., Vegega, M., & Smither, D. (2009, December). *Drug-impaired driving: Understanding the problem and ways to reduce it; A report to Congress* (Report No. DOT HS 811 268). National Highway Traffic Safety Administration. https://rosap.ntl.bts.gov/view/dot/1949

[2] National Highway Traffic Safety Administration. (2024, April). Drug-impaired driving data collection: Report to Congress (Report No. DOT HS 813 574).

[3] National Transportation Research Board. (2022, December) Alcohol, Other Drug, and Multiple Drug Use Among Drivers: Alcohol (Safety Research Report SRR-22-02).

[4]Berning, A., Smith, R. C., Drexler, M., & Wochinger, K. (2022, March). Drug testing and traffic safety: What you need to know (Report No. DOT HS 813 264). National Highway Traffic Safety Administration.

[5]National Highway Traffic Safety Administration. (2024, April). 2022 FARS/CRSS coding and validation manual (Report No. DOT HS 813 545).

[6]North Dakota Office of the Attorney General: Crime Laboratory Division. Portscheller, Janelle, June 2024, Oral Fluid Project Data Analysis, North Dakota Highway Safety Conference, Bismarck, N.D.

[6]Indiana Criminal Justice Institute: Office of Traffic Safety. (2024 March). Fiscal Year 2023 Indiana Annual Report.

[7]International Association of Chiefs of Police. (2023, June). 2023 Annual Report: Drug Evaluation and Classification Program.

[8]Matt Kling, “One State’s Experience with Oral Fluid Testing,” Police Chief Online, January 10, 2024.