



K28 SOFT/AAFS Drugs and Driving Special Scientific Session

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After attending these presentations, attendees will have a greater understanding of the prevalence of drug use in drivers, challenges Driving Under the Influence of Drugs (DUID) cases pose for forensic laboratories, and how those challenges effect law enforcement and prosecution.

These presentations, focused on DUID, will impact the forensic science community's understanding of the extent of DUID cases, providing specific research findings related to several drugs' effects on the skills required to safely operate a motor vehicle and the far-reaching implications for law enforcement and attorneys.

Introduction: DUID cases pose unique challenges not only to forensic laboratories, but to law enforcement and the legal community as well. Forensic laboratories can vary significantly in their resources, scope of testing, and, in some cases, can be restricted by local legislation. This special session will discuss the efforts of the National Safety Council's Alcohol, Drugs and Impairment Division to provide guidelines for DUID laboratories and the impact those guidelines have on law enforcement and prosecution of DUID cases. Specific examples of impairment that result from driving under the influence of marijuana in a *per se* legislation state as well as presentations regarding phenobarbital and synthetic cathinones impairment will be presented.

The Importance of Standardization for DUID Laboratories: Forensic laboratories involved in DUID casework utilize a wide variety of resources which leads to difficulty in standardization of testing. The National Safety Council's Alcohol, Drugs and Impairment Division appointed a subcommittee to address the similarities and differences across various DUID laboratories. The process included surveys from each state's Traffic Safety Resource Prosecutors (TSRP), Drug Recognition Expert (DRE) State Coordinators, and forensic laboratories performing DUID testing. The subcommittee examined the surveys and, subsequently, established guidelines for the appropriate scope of testing for these laboratories. The guidelines set forth will be a useful tool for laboratories to use to provide the appropriate support for law enforcement arrests involving individuals driving under the influence of drugs.

Re-examining the "Three-Legged Stool" Approach to Detering Drugged Driving: As the Drug Evaluation and Classification (DEC) Program and Advanced Roadside Impaired Driving Enforcement (ARIDE) training continues to increase nationally, more suspected drug-impaired drivers are being arrested on our nation's roadways. With the increased number of officers being trained to detect drug impairment, additional workloads are being placed on toxicologists and forensic laboratories to support law enforcement opinions and to report toxicology findings in a timely manner to assist in the prosecution of these cases. An important part of the DRE training is the understanding of the "three-legged stool" concept which includes the DRE opinion, toxicology, and prosecution. This presentation will emphasize the three important "legs" that are needed to support the DEC Program and the efforts to deter drug-impaired driving.

Lab Analysis and the Law: The Impact of *Bullcoming v. New Mexico* on Forensic Science Testimony: This presentation will provide a prosecutor's overview of the impact on forensic analysis testimony versus basic maintenance or procedural testimony following the U.S. Supreme Court's 2011 ruling in *Bullcoming*. Although the factual distinction has succeeded in most Washington courts, some jurisdictions continue to require a specific lab analyst and/or breath test technician to testify even regarding routine procedural processes.

Marijuana Impaired Driving in a Marijuana-Legal State: In December 2012, the possession and private use of marijuana became legal in the state of Washington. At the same time, a *per se* level of 5ng/mL of delta-9-THC in blood came into effect. In December 2013, marijuana products will be commercially available to the public via state-licensed facilities. This presentation will provide an overview of suspected driving under the influence cases involving marijuana pre and post the legalization of marijuana in Washington.

Butalbital and Driving Impairment: Butalbital (Fiorinal[®]) is a barbiturate commonly prescribed for the treatment of tension headaches and migraine. Butalbital has been reported to be the most commonly encountered barbiturate in DUID cases. Butalbital has common Central Nervous System (CNS) depressant



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properties, with side effects including sedation, drowsiness, and feelings of intoxication which can contribute to driving impairment. Twenty-six DUID cases from the state of Washington are reviewed with results from field sobriety tests and toxicological findings included. Butalbital whole blood concentrations ranged from 1.0 to 30.2mg/L, with a mean and median of 16.0mg/L. General impairment indicators in these cases included horizontal and vertical nystagmus, lack of convergence, poor motor coordination, and balance and speech problems which are common to CNS depressant intoxication, similar to that associated with alcohol. These findings indicate the importance of toxicological testing for butalbital in cases where CNS depressants are indicated.

Synthetic Cathinones and Driving Performance: Designer drugs have proven challenging for forensic laboratories both analytically and during interpretation of laboratory results. Currently, there is very little in the scientific literature to document cases of driving under the influence of synthetic cathinones. This presentation will closely examine the impairment documented by law enforcement during recent DUID investigations and the related toxicology results. Challenges including limited availability of reference materials, method validation, and the ability to predict the next synthetic cathinone will also be discussed.

Drugs and Driving, Impairment, Forensic Toxicology