



K33 A Retrospective Study of Drug Prevalence in Alcohol Related Driving Arrests

Jennifer F. Limoges, MSFS, New York State Police, Forensic Investigation Center, 1220 Washington Avenue, Building 30, Albany, NY 12226-3000; Aaron D. Tandy, BS, Clarkson University, Department of Chemistry & Biomolecular Science, Potsdam, NY 13699; and Heather M. Brown, BS, New York State Police, Forensic Investigation Center, 1220 Washington Avenue, Building 30, Albany, NY 12226-3000*

The goal of this presentation is to help illustrate some of the difficulties involved in assessing the full impact of drug impaired driving. Officers may not be adequately trained to recognize the symptoms of drug impaired drivers, laboratories may not be performing comprehensive enough testing to identify the drugs that can impair, and prosecutors may not be pursuing the prosecution of drug impaired drivers.

This presentation will impact the forensic science community by providing data to support increased commitment and resources to combat the drug impaired driving problem.

Impaired driving investigations constitute the majority of cases submitted to the NYSP Crime Laboratory's Toxicology section. Both blood and urine are submitted, and the scope of testing is determined by the charges involved and the submitter's request. Alcohol testing is performed by headspace gas chromatography. Drug testing involves an immunoassay screen and a basic drug screen/confirmation by GC-NPD and GC-MS, plus drug class specific confirmations as warranted. Specimens are retained at least eighteen months after analysis.

A retrospective study was conducted on blood specimens that had exceeded the eighteen month retention time. Over 300 samples from 2005 and 2006 were tested. The samples were screened by ELISA for the following eight drugs/drug classes at the indicated cut-offs: cannabinoids (10 ng/mL), cocaine / benzoylecgonine (50 ng/mL), opiates (20 ng/mL), benzodiazepines (50 ng/mL), methamphetamine/MDMA (20 ng/mL), methadone (50 ng/mL), carisoprodol (500 ng/mL), and zolpidem (25 ng/mL).

The study involved cases that had only alcohol testing performed originally. The first set of samples involved charges/requests related only to alcohol. The subsequent ELISA drug testing conducted in this study revealed 39% were presumptive positive for one or more drug/drug class. The majority, 30% of the total cases, were presumptive positive for cannabinoids. The second set of cases involved charges/requests for alcohol and drugs, but only alcohol testing was performed. Laboratory policy dictates that alcohol testing be conducted first. If the result is $\geq 0.11\%$ by weight, results are reported with a statement indicating that if drug testing is still needed, you must contact the laboratory. The additional testing was not requested for these cases. However, when ELISA drug screening was performed for this study, 48% of these cases were presumptive positive for one or more drug/drug class, primarily cannabinoids.

An additional part of this study involved cases with charges/requests related to drugs, where drug testing was originally performed (some may have also included alcohol testing with results $< 0.11\%$ by weight). Since the original testing of these cases, the protocol for immunoassay drug screening in the laboratory changed from FPIA to ELISA, more assays were included, and many cutoffs were lowered. These cases were included in the study to assess the significance of these changes.

Drugs, Driving, Cannabinoids