K50 Statistical Assessment of Toxicology Cases Submitted to the Las Vegas Metropolitan Police Department (LVMPD) From 2000 Through 2014

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After attending this presentation, attendees will better understand the statistical trends in Las Vegas DUI alcohol and drug cases over a 14-year period.

This presentation will impact the forensic science community by serving as a statistical reference for the occurrence of alcohol and drugs in DUI cases submitted to the LVMPD over an extended time period. Moreover, the dynamics of a large tourist population and its relationship to trends in DUI casework may be of interest to cities with similar demographics.

Las Vegas is an international tourist destination known worldwide for its dining and entertainment. The LVMPD serves the law enforcement needs of a jurisdictional population of 1.5 million residents and 40 million annual visitors. The majority of the toxicology requests submitted to the LVMPD are categorized as human performance Driving Under the Influence (DUI) cases. Toxicology statistics were evaluated for cases submitted to the laboratory from 2000 through 2014. The specific areas of interest included in this study were breath alcohol, blood alcohol, and blood drug analyses.

DUI alcohol casework constituted the majority of all toxicology requests at the LVMPD. An average of 2,300 breath alcohol tests were conducted annually between 2000 and 2008. The number of breath alcohol tests increased to 3,205 in 2009, peaked at 3,746 in 2010, and has held steady since that time. Blood alcohol casework numbered 2,630 at the beginning of this study and gradually increased to a maximum of 7,824 in 2009. After 2009, the number of blood alcohol cases progressively decreased to a total of 3,488 in 2014. Statistics for blood drug casework follow a similar pattern as the blood alcohol data. There were 782 blood drug cases in 2000. The number of blood drug cases increased to a maximum of 3,156 in 2011 before declining to 1,753 in 2014.

The gradual increase in toxicology requests from 2000 through 2008 mirrored a growing population and the hiring of additional police officers to meet population demands. The notable increase in the number of breath alcohol tests beginning in 2009 corresponded to a strategy by the LVMPD to encourage more economical breath alcohol analysis during the Great Recession. A significant decrease in blood alcohol and blood drug requests occurred in 2013. The LVMPD police force declined in 2013 when hiring did not keep up with attrition. Another contributing factor to the drop in blood casework may be a United States Supreme Court decision (*Missouri v. McNeely*, 2013) requiring a search warrant prior to drawing blood from persons suspected of DUI.[1]

Alcohol concentration data were consistent over the course of this study. A detailed look at DUI alcohol statistics revealed that 10% of cases involved drivers with alcohol concentrations less than the 0.08% illegal limit. A large percentage of subjects had alcohol concentrations between 0.08% and 0.16% (50% of breath alcohol cases, 33% of blood alcohol cases). A remarkably high percentage of individuals cited for DUI had elevated alcohol levels of 0.16% and higher (40% of breath alcohol cases, 55% of blood alcohol cases). The large percentage of drivers with elevated alcohol concentrations is alarming because these individuals represent a very high risk to public safety.

The majority (>40%) of all DUI drug cases submitted to the LVMPD were positive for a single drug/drug class. There has been an increase in the percentage of poly drug cases over the years and these types of cases currently represent 30% of the total. The percentage of cases where no drugs were detected has declined and is currently tracking at 20%. Cannabis is the most commonly occurring drug found in Las Vegas DUI cases. Interestingly, the prevalence of cannabis has held steady throughout this study and accounts for approximately 38% of all drugs reported. Benzodiazepines represent the second most prominently occurring drug type.

Reference(s):

1. *Missouri v. McNeely* 569 U.S. ___ (2013).

Las Vegas, Forensic Toxicology, DUI

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