



K31 National, Regional, and State Trends in Workplace Urine Drug Testing Results From a Medical Review Officer Data Source, 2003-2005

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After attending this presentation, attendees will have an enhanced understanding of the relationships between laboratory reported drug test results and Medical Review Officer (MRO) verified results reported to employers from 2003-2005 for Non-Federally Regulated Workplace Drug Testing. Drug testing results will be evaluated nationally, by census region, and by state. Map displays by state will evidence variation across states. Geographic Information System (GIS) functionality will display spatial distribution of the data.

This presentation will impact the forensic science community by describing how annual positive rates by geographic area for the Non-Regulated Workforce determined from Medical Review Officer (MRO) verified data, which excludes blind quality assurance samples and results reversed through valid medical explanation, may more accurately represent illegal drug use rates and geographical trends to the forensic community.

Records for over 2.1 million Non-Regulated specimens collected during calendar years 2003 through 2005 from more than 8,000 companies and tested by 41 laboratories were obtained from a large MRO data source. The database includes donor demographics, employer information, collection site information, laboratory results, and MRO determinations, but does not include employer blind quality assurance samples. Analysis of the data indicates that, following MRO review, there was a decreasing trend of annual positive rates and an increasing trend of reversal rates in regulated and non-regulated populations during the 36 month period. The table below illustrates the geospatial distribution of MRO verified positive drug testing results for Non-Regulated specimens by U.S. Census regions.

Non Regulated Drug Testing 2003-2005	Total, U.S.	Northeast	South	Midwest	West
MRO Verified Drug Positive Rates, %					
Overall Drug Positive Rate, 2003	3.74%	3.39%	3.56%	4.40%	3.71%
Overall Drug Positive Rate, 2004	3.52%	3.31%	3.52%	3.58%	3.63%
Overall Drug Positive Rate, 2005	3.18%	3.07%	3.21%	3.21%	3.16%
MRO Verified Drug Positive Rates, %					
Overall Drug Positive Rate, 2003-2005	3.46%	3.25%	3.41%	3.70%	3.46%
Amphetamines	0.18%	0.05%	0.14%	0.11%	0.51%
Cocaine	0.61%	0.59%	0.68%	0.63%	0.37%
Marijuana	2.49%	2.44%	2.39%	2.78%	2.44%
Opiates	0.08%	0.07%	0.09%	0.09%	0.08%
Phencyclidine	0.01%	0.03%	0.01%	0.01%	0.01%
Barbiturates	0.06%	0.07%	0.08%	0.04%	0.04%
Benzodiazepines	0.14%	0.09%	0.19%	0.11%	0.11%
# of Specimens Tested, 2003-2005	2,111,528	320,329	999,052	443,807	348,340

The overall MRO verified drug positive rate has decreased nationally as well as in all four regions during the period 2003-2005. The most dramatic decrease was in the Midwest region where it decreased from 4.40% to 3.21%. Looking at drug classes for 2003-2005, the MRO verified positive rate for amphetamines was significantly greater in the West region (0.51%), while the cocaine positive rate in the West (0.37%) was the lowest of all regions. The positive rates for marijuana and opiates were not significantly different among the regions. The positive rates for both barbiturates and benzodiazepines were highest in the South region. The annual positive rate for marijuana has consistently evidenced a downward trend nationally (2.76% to 2.21%) and in all regions during the three year period. Data supports the observation that Workplace Drug Testing may be a deterrent to illicit drug use.

Workplace Drug Testing, Drug Testing Database, Medical Review Officer Verified Results