



Contacts:

Wendy Bost, Quest Diagnostics (Media): 973-520-2800

Shawn Bevec, Quest Diagnostics (Investors): 973-520-2900

**Drug Positivity in U.S. Workforce Rises to Nearly Highest Level in a Decade,
Quest Diagnostics Analysis Finds**

***Annual Drug Testing Index Reveals Fifth Straight Year of Increases in Detection Rate of
Amphetamine and Heroin; Marijuana Positivity Increases 47 Percent Since 2013 in Oral Fluid Testing***

MADISON, N.J., September 15, 2016 – Following years of declines, the percentage of employees in the combined U.S. workforce testing positive for drugs has steadily increased over the last three years to a 10-year high, according to an analysis of nearly 11 million workforce drug test results released today by Quest Diagnostics (NYSE: DGX), the world's leading provider of diagnostic information services.

The Quest Diagnostics Drug Testing Index™ examines illicit drug use by America's workforce based on an analysis of de-identified results of more than 9.5 million urine, 900,000 oral fluid, and 200,000 hair laboratory-based tests performed nationally by the company for employers in 2015. The findings were unveiled today at the Substance Abuse Program Administrators Association (SAPAA) annual conference being held in Louisville, Kentucky.

Insights from the 2015 data show that the positivity rate for 9.5 million urine drug tests in the combined U.S. workforce increased to four percent, a relative change of 2.6 percent over the positivity rate in 2014 (4.0% versus 3.9%). The 2015 positivity rate reflects a relative increase of 14 percent over the 10-year low of 3.5 percent observed in both 2010 and 2011. The last year that the positivity rate for urine drug tests in the combined U.S. workforce was at or above four percent was 2005, when it reached 4.1 percent.

Another notable trend is the rising positivity rate for post-accident urine drug testing in both the general U.S. and federally-mandated, safety-sensitive workforces. Post-accident positivity increased 6.2 percent in 2015 when compared to 2014 (6.9% versus 6.5%) and increased 30 percent since 2011 (5.3%). In addition, post-accident positivity for the safety-sensitive workforce has risen 22 percent during a five-year time period (2.8% in 2015 versus 2.3% in 2011).

In oral fluid drug testing, the overall positivity rate increased 47 percent over the last three years in the general U.S. workforce to 9.1 percent in 2015 from 6.7 percent in 2013. The increase was largely driven by double-digit increases in marijuana positivity during this time period. In 2015, there was a 25 percent relative increase in marijuana detection as compared to 2014 (7.5% versus 6.0%). Slightly more than nine percent of oral fluid test results were positive for one or more drugs, suggesting that nearly one in eleven job applicants were unable to pass an oral fluid drug screen.

Among drug testing methods, overall positivity in the general U.S. workforce was highest in hair drug tests, at 10.3 percent in 2015, a seven percent increase over 2014 (9.6%) Because hair testing shows repetitive drug use as far back as 90 days, it can give a more complete drug-use history. By comparison, urine detects recent or new drug use, typically in one to three days, and oral fluid detects recent drug use in the previous 24-48 hours. In the general U.S. workforce, the rate of amphetamine, marijuana, and heroin detection increased annually for the past five years in urine testing. Amphetamine positivity increased 44 percent and marijuana positivity increased 26 percent since 2011; almost half (45%) of individuals in the general U.S. workforce with a positive drug test for any substance in 2015 showed evidence of marijuana use. Heroin positivity in that period, indicated by the presence of the 6-acetylmorphine marker (6-AM), increased 146 percent. Oxycodone positivity rate has declined annually since 2011, confirming previous research showing that opioid prescriptions have declined in 49 states since 2012.



“Our nationally representative analysis clearly shows that drug use by the American workforce is on the rise, and this trend extends to several different classes of drugs and categories of drug tests,” said Barry Sample, Ph.D., senior director, science and technology, Quest Diagnostics Employer Solutions. “The 2015 findings related to post-accident testing results should also be of concern to employers, especially those with safety-sensitive employees.”

“The DTI statistics for the last five years underscore the threat to employers – and employees – from drug abusers in our workplace. The numbers on hair testing – the methodology with the longest look-back and therefore a more telling measurement of regular use – show a 34-percent positive-rate increase for illegal drug use by the general workforce in the last five years,” said Mark de Bernardo, executive director, Institute for a Drug-Free Workplace. “However, all the numbers for various testing methodologies confirm this disturbing trend and should provide a wake-up call to employers to do more to combat workplace substance abuse and to do it more effectively.”

Among urine test results indicating drug use for federally-mandated, safety-sensitive employees, heroin positivity increased a relative 4.5 percent since 2014, and a relative 84 percent since 2011. In addition, positive test results for safety-sensitive workers showed a seven percent year-over-year increase in amphetamines (0.58 % in 2015 versus 0.54 % in 2014).

“This report shows a welcome decline in workplace drug test positives for certain prescription opiates but a disturbing increase in heroin positives. This rise in heroin should concern both policymakers and employers. Substance abuse is a safety risk for everyone. This new workplace evidence is an additional sign of the rising national heroin problem, this time in the workplace,” said Robert DuPont, M.D., former director of the National Institute on Drug Abuse (NIDA).

About the Quest Diagnostics Drug Testing Index

The Quest Diagnostics Drug Testing Index (DTI) is an analysis of test results according to three categories of workers: federally mandated, safety-sensitive workers; the general workforce; and the combined U.S. workforce. Federally mandated, safety sensitive workers include pilots, bus and truck drivers, and workers in nuclear power plants, for whom routine drug testing is mandated by the U.S. Department of Transportation and the Nuclear Regulatory Commission. Quest Diagnostics has analyzed annual workplace drug testing data since 1988. The strengths of the Drug Testing Index analysis include its large, nationally representative sample size, longitudinal monitoring, a testing population that is generally reflective of the U.S. workforce and the quality of the company's drug testing services to confirm positive results. Limitations include analysis only of employers that perform drug testing with the company and a lack of exact cross-specimen comparisons due to variations in substances for which employers test.

For more information about the Quest Diagnostics Drug Testing Index, including comprehensive data from the current report, visit www.QuestDiagnostics.com/DTI.

About Quest Diagnostics

Quest Diagnostics empowers people to take action to improve health outcomes. Derived from the world's largest database of clinical lab results, our diagnostic insights reveal new avenues to identify and treat disease, inspire healthy behaviors and improve health care management. Quest Diagnostics annually serves one in three adult Americans and half the physicians and hospitals in the United States, and our 44,000 employees understand that, in the right hands and with the right context, our diagnostic insights can inspire actions that transform lives. www.QuestDiagnostics.com.

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Quest Diagnostics Drug Testing Index™

Full Year 2015 Tables

**Table 1. Annual Positivity Rates – Urine Drug Tests
(For Combined U.S. Workforce)**

(More than 9.5 million tests from January to December 2015)

Year	Drug Positivity Rate
1988	13.6%
1989	12.7%
1990	11.0%
1991	8.8%
1992	8.8%
1993	8.4%
1994	7.5%
1995	6.7%
1996	5.8%
1997	5.0%
1998	4.8%
1999	4.6%
2000	4.7%
2001	4.6%
2002	4.4%
2003	4.5%
2004	4.5%
2005	4.1%
2006	3.8%
2007	3.8%
2008	3.6%
2009	3.6%
2010	3.5%
2011	3.5%
2012	3.5%
2013	3.7%
2014	3.9%
2015	4.0%

Table 2. Positivity Rates By Testing Category – Urine Drug Tests

Testing Category	2011	2012	2013	2014	2015
Federally-Mandated, Safety-Sensitive Workforce	1.7%	1.6%	1.7 %	1.7%	1.8%
General U.S. Workforce	4.1%	4.1%	4.3%	4.7%	4.8%
Combined U.S. Workforce	3.5%	3.5%	3.7%	3.9%	4.0%

QuestDiagnostics.com/DTI

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**Table 3. Positivity Rates By Testing Reason – Urine Drug Tests
(For Federally-Mandated, Safety-Sensitive Workforce)**

(More than 2.5 million tests from January to December 2015)

Testing Reason	2011	2012	2013	2014	2015
Follow-Up	2.8%	2.8%	3.0%	3.2%	3.1%
For Cause	7.5%	8.5%	9.3%	9.3%	11.0%
Periodic	1.6%	1.5%	1.3%	0.9%	1.8%
Post-Accident	2.3%	2.4%	2.5%	2.6%	2.8%
Pre-Employment	1.8%	1.7%	1.8%	1.9%	1.9%
Random	1.5%	1.4%	1.5%	1.5%	1.5%
Return to Duty	2.5%	2.7%	2.8%	2.9%	3.4%

**Table 4. Positivity Rates By Testing Reason – Urine Drug Tests
(For General U.S. Workforce)**

(Nearly 7 million tests from January to December 2015)

Testing Reason	2011	2012	2013	2014	2015
Follow-Up	6.6%	6.4%	7.3%	7.1%	8.6%
For Cause	26.8%	26.3%	27.7%	27.7%	31.9%
Periodic	1.3%	1.3%	1.3%	1.6%	1.6%
Post-Accident	5.3%	5.5%	5.9%	6.5%	6.9%
Pre-Employment	3.5%	3.7%	3.8%	4.0%	4.2%
Random	5.2%	4.9%	5.2%	5.7%	5.5%
Return to Duty	5.2%	5.4%	6.1%	6.4%	6.3%

**Table 5. Positivity Rates By Drug Category – Urine Drug Tests
(For Federally-Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)**

(More than 2.5 million tests from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
6-AM	0.012%	0.014%	0.017%	0.022%	0.023%
Amphetamines	0.44%	0.48%	0.51%	0.54%	0.58%
Cocaine	0.32%	0.27%	0.26%	0.25%	0.26%
Marijuana	0.64%	0.63%	0.67%	0.71%	0.71%
MDMA	0.003%	0.003%	0.004%	0.005%	0.005%
Opiates	0.18%	0.18%	0.19%	0.18%	0.21%
PCP	0.04%	0.03%	0.03%	0.03%	0.03%

**Table 6. Positivity Rates By Drug Category – Urine Drug Tests
(For General U.S. Workforce, as a percentage of all such tests)**

(Nearly 7 million tests from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
6-AM	0.015%	0.022%	0.023%	0.031%	0.037%
Amphetamines	0.77%	0.87%	0.97%	1.04%	1.11%
Barbiturates	0.26%	0.25%	0.23%	0.22%	0.22%
Benzodiazepines	0.78%	0.73%	0.74%	0.71%	0.68%
Cocaine	0.27%	0.21%	0.22%	0.24%	0.25%
Marijuana	1.9%	2.0%	2.1%	2.4%	2.4%
MDMA	0.003%	0.001%	0.002%	0.003%	0.005%
Methadone	0.20%	0.19%	0.18%	0.18%	0.18%
Opiates	0.42%	0.44%	0.46%	0.47%	0.49%
Oxycodones	1.1%	0.96%	0.88%	0.80%	0.75%
PCP	0.01%	0.01%	0.01%	0.02%	0.02%
Propoxyphene	0.06%	0.02%	0.01%	0.01%	0.00%

**Table 7. Positivity Rates By Drug Category – Urine Drug Tests
(For Combined U.S. Workforce, as a percentage of all such tests)**

(More than 9.5 million tests from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
6-AM	0.013%	0.017%	0.020%	0.025%	0.028%
Amphetamines	0.69%	0.77%	0.85%	0.90%	0.97%
Barbiturates	0.26%	0.25%	0.23%	0.22%	0.22%
Benzodiazepines	0.78%	0.73%	0.74%	0.71%	0.68%
Cocaine	0.28%	0.23%	0.23%	0.24%	0.25%
Marijuana	1.6%	1.6%	1.7%	1.9%	1.9%
MDMA	0.003%	0.002%	0.003%	0.004%	0.005%
Methadone	0.20%	0.19%	0.18%	0.18%	0.18%
Opiates	0.36%	0.37%	0.39%	0.39%	0.41%
Oxycodones	1.1%	0.96%	0.88%	0.80%	0.75%
PCP	0.02%	0.02%	0.02%	0.02%	0.02%
Propoxyphene	0.06%	0.02%	0.01%	0.01%	0.00%

**Table 8. Non-Negative Rates By Specimen Validity Test (SVT)² Category – Urine Drug Tests
(For Federally-Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)**

(More than 2.5 million tests from January to December 2015)

SVT Category	2011	2012	2013	2014	2015
Acid-Base	0.03%	0.03%	0.03%	0.02%	0.02%
Invalid	0.09%	0.11%	0.18%	0.16%	0.09%
Oxidizing adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Substitution	0.06%	0.05%	0.05%	0.05%	0.05%

²Specimen validity testing is the evaluation of a specimen to determine if it is consistent with a normal human specimen. Tests for specimen validity include tests to determine whether a specimen is adulterated or substituted.

**Table 9. Non-Negative Rates by Drug/SVT Category – Urine Drug Tests
(For General U.S. Workforce, as a percentage of all non-negatives)**

(Nearly 7 million tests from January to December 2015)

SVT Category	2011	2012	2013	2014	2015
Acid-Base	0.001%	0.001%	0.001%	0.001%	0.001%
Invalid	0.14%	0.15%	0.13%	0.13%	0.11%
Oxidizing adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Substitution	0.01%	0.01%	0.02%	0.02%	0.02%

**Table 10. Non-Negative Rates by Drug/SVT Category – Urine Drug Tests
(For Federally-Mandated, Safety-Sensitive Workforce, as a percentage of all non-negatives)**

(More than 50 thousand non-negative test results from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
6-AM	0.62%	0.75%	0.87%	1.12%	1.14%
Acid-Base	1.60%	1.40%	1.30%	1.08%	1.14%
Amphetamines	24.60%	26.50%	26.30%	27.87%	29.45%
Cocaine	17.50%	14.90%	13.40%	12.58%	13.11%
Invalid	4.90%	6.36%	9.10%	7.95%	4.59%
Marijuana	35.60%	35.24%	34.60%	36.08%	35.91%
MDMA	0.14%	0.17%	0.21%	0.24%	0.24%
Opiates	9.70%	9.90%	10.00%	9.24%	10.66%
Oxidizing adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
PCP	2.10%	1.80%	1.50%	1.31%	1.31%
Substituted	3.20%	3.00%	2.70%	2.51%	2.45%

**Table 11. Non-Negative Rates by Drug/SVT Category – Urine Drug Tests
(For General U.S. Workforce, as a percentage of all non-negatives)**

(More than 350 thousand non-negative test results from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
6-AM	0.06%	0.09%	0.11%	0.14%	0.16%
Acid-Base	0.03%	0.03%	0.03%	0.03%	0.03%
Amphetamines	17.50%	19.30%	20.40%	20.20%	21.34%
Barbiturates	3.70%	3.50%	3.10%	2.84%	2.83%
Benzodiazepines	8.70%	9.60%	9.30%	8.56%	8.21%
Cocaine	6.10%	4.80%	4.60%	4.70%	4.85%
Invalid	3.20%	3.30%	2.90%	2.53%	2.22%
Marijuana	44.30%	43.40%	44.00%	45.91%	45.19%
MDMA	0.01%	0.01%	0.01%	0.02%	0.03%
Methadone	2.60%	2.30%	2.20%	2.13%	2.12%
Methaqualone	0.000%	0.000%	0.000%	0.000%	0.000%
Opiates	9.50%	9.80%	9.80%	9.63%	9.80%
Oxidizing adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Oxycodones	3.10%	3.00%	2.80%	2.55%	2.57%
PCP	0.32%	0.30%	0.30%	0.36%	0.31%
Propoxyphene	0.71%	0.23%	0.11%	0.06%	0.03%
Substituted	0.26%	0.31%	0.32%	0.35%	0.32%

**Table 12. Non-Negative Rates by Drug/ SVT Category – Urine Drug Tests
(For Combined U.S. Workforce, as a percentage of all non-negatives)**

(More than 400 thousand non-negative test results from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
6-AM	0.12%	0.17%	0.20%	0.26%	0.28%
Acid-Base	0.23%	0.20%	0.19%	0.16%	0.16%
Amphetamines	18.40%	20.20%	21.20%	21.16%	22.34%
Barbiturates	3.20%	3.10%	2.70%	2.48%	2.48%
Benzodiazepines	7.60%	8.50%	8.10%	7.48%	7.19%
Cocaine	7.50%	6.00%	5.80%	5.69%	5.87%
Invalid	3.40%	3.70%	3.70%	3.21%	2.51%
Marijuana	43.30%	42.40%	42.90%	44.67%	44.05%
MDMA	0.03%	0.03%	0.04%	0.05%	0.06%
Methadone	2.30%	2.00%	1.90%	1.86%	1.86%
Methaqualone	0.000%	0.000%	0.000%	0.000%	0.000%
Opiates	9.50%	9.80%	9.80%	9.59%	9.91%
Oxidizing adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Oxycodones	2.70%	2.60%	2.50%	2.23%	2.25%
PCP	0.54%	0.48%	0.44%	0.48%	0.43%
Propoxyphene	0.62%	0.20%	0.10%	0.06%	0.03%
Substituted	0.62%	0.63%	0.62%	0.62%	0.58%

**Table 13. Positivity Rates By Testing Category – Oral Fluid Drug Tests
(For General U.S. Workforce)**

(More than 900 thousand tests from January to December 2015)

2011	2012	2013	2014	2015
4.3%	5.5%	6.7%	7.7%	9.1%

**Table 14. Positivity Rates By Testing Reason – Oral Fluid Drug Tests
(For General U.S. Workforce)**

(More than 900 thousand tests from January to December 2015)

Testing Reason	2011	2012	2013	2014	2015
Follow-Up	8.3%	11.4%	9.0%	10.0%	11.4%
For Cause	21.8%	21.6%	28.5%	24.1%	22.1%
Post-Accident	4.2%	4.0%	4.6%	4.9%	5.7%
Pre-Employment	4.4%	5.7%	6.7%	7.6%	9.4%
Random	3.3%	4.1%	6.9%	9.5%	5.5%
Return to Duty	4.0%	6.3%	6.7%	8.7%	9.2%

**Table 15. Positivity Rates By Drug Category – Oral Fluid Drug Tests
(For General U.S. Workforce)**

(More than 900 thousand tests from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
Amphetamine	0.25%	0.43%	0.57%	0.57%	0.56%
Cocaine/Metabolite	0.41%	0.31%	0.36%	0.47%	0.46%
Marijuana	2.7%	4.0%	5.1%	6.0%	7.5%
Methamphetamines	0.12%	0.16%	0.24%	0.33%	0.29%
Opiates	0.97%	0.88%	0.83%	0.85%	0.78%
PCP	0.02%	0.02%	0.02%	0.02%	0.04%

**Table 16. Positivity Rates By Testing Category – Hair Drug Tests
(For General U.S. Workforce)**

(More than 200 thousand tests from January to December 2015)

2011	2012	2013	2014	2015
7.7%	5.6%	7.4%	9.6%	10.3%

**Table 17. Positivity Rates By Testing Reason – Hair Drug Tests
(For General U.S. Workforce)**

(More than 200 thousand tests from January to December 2015)

Testing Reason	2011	2012	2013	2014	2015
Pre-Employment	6.0%	4.7%	6.0%	7.9%	8.8%
Random	10.9%	6.3%	9.1%	10.7%	11.5%

**Table 18. Positivity Rates By Drug Category – Hair Drug Tests
(For General U.S. Workforce)**

(More than 200 thousand tests from January to December 2015)

Drug Category	2011	2012	2013	2014	2015
Amphetamines (Methamphetamine)	0.91%	0.77%	1.2%	1.2%	1.5%
Cocaine	2.5%	2.3%	2.3%	2.6%	2.6%
Marijuana	4.8%	2.8%	4.3%	6.5%	7.0%
Opiates	0.15%	0.18%	0.19%	0.21%	0.32%
PCP	0.01%	0.01%	0.02%	0.06%	0.01%