



# Results from the 2016 Drug and Alcohol Testing Survey

## INTRODUCTION

This report summarizes the results of the 2016 Federal Motor Carrier Safety Administration (FMCSA) Drug and Alcohol Testing Survey. This annual survey measures the percentage of commercial driver's license (CDL) drivers who test positive for controlled substances (herein referred to as drugs) and/or alcohol, as a result of random and non-random (i.e., pre-employment, post-crash, and reasonable suspicion/follow-up) testing.

## BACKGROUND

Pursuant to Part 382 of the Federal Motor Carrier Safety Regulations (FMCSRs), motor carriers that employ CDL drivers are required to have drug and alcohol testing programs. In 2016, FMCSA required these carriers to randomly test 10 percent of their CDL drivers for alcohol and 25 percent of their CDL drivers for drugs. FMCSA also requires carriers to perform non-random drug and alcohol testing on CDL drivers whenever:

- The driver is being considered for employment (only for drugs and only when the driver has not recently been in a drug and alcohol testing program).
- The driver has been involved in a crash (only when the crash involves a fatality or when the driver receives a citation in a towaway or injury-related crash).
- The driver is suspected by a supervisor of using drugs or alcohol while at work.

In the case of alcohol, an on-duty CDL driver is in violation of the FMCSRs when the driver's blood alcohol content (BAC) is greater than or equal to 0.02 grams per 210 liters of breath. If the driver tests at a concentration of 0.04 or higher, pursuant to Part 382, subpart F, the driver also must undergo referral, evaluation, and treatment. The alcohol violation rate for the industry (determined annually

by FMCSA and used to evaluate required motor carrier testing rates) is determined based on a 0.04 cutoff level. For drugs (marijuana, cocaine, opiates, amphetamines, and phencyclidine [PCP]), the cutoff levels for identifying use are based on guidelines set by the Department of Health and Human Services.

The positive usage rates presented herein represent weighted statistical estimates. These estimates are generalizable to the entire CDL driver population in the national fleet and have been derived by using standard statistical techniques applicable to stratified samples. It is important to keep in mind that the rates obtained from these procedures do not represent true values; rather, they are unbiased estimates of the true rates with associated sampling errors.

## RESULTS

Estimates of positive usage rates from both random and non-random testing are discussed separately, below. Survey estimates from the 2016 survey are presented in Table 1 (drugs) and Table 2 (alcohol). Both tables also include estimates from the 2014 and 2015 surveys. The term "positive usage rate" refers to use of any of the five drugs referenced in the previous section. The overall positive rate also includes refusals to test, which are treated as positives.

## RANDOM TESTING

For the 2016 survey, survey forms were sent to 4,468 randomly selected motor carriers. Of these forms, 2,402 were completed and returned to FMCSA, resulting in usable data from:

- 1,689 carriers (comprising 305,843 CDL drivers) for random controlled substance testing.
- 1,561 carriers (comprising 122,860 CDL drivers) for random alcohol testing.

Respondents providing non-usable data represent entities that are out of business, exempt, have no testing program in place, or belong to consortia that did not test any drivers for the carrier during 2016. For random testing conducted in 2016, the results are as follows:

- **Drugs:** The estimated positive usage rate for drugs in 2016 is 0.7 percent. The 95-percent confidence interval for this estimate ranges from 0.6 to 0.8 percent. If the survey were to be replicated, it would be expected that the confidence interval derived from each replication would contain the true usage rate in 95 out of 100 surveys. For 2014 and 2015, the estimated positive usage rate for drugs was estimated to be 0.9 percent and 0.8 percent, respectively (see Table 1).
- **Alcohol:** The estimated violation rate for alcohol usage (the percentage of drivers with a BAC of 0.04 or higher) in 2016 is 0.03 percent. The 95-percent confidence interval for this estimate ranges from 0.026 to 0.034 percent. If the survey were to be replicated, it would be expected that the confidence interval derived from each replication would contain the true usage rate in 95 out of 100 surveys. For 2014 and 2015, the alcohol usage violation rates were 0.08 (see Table 2).
- **Part 382 Compliance:** Based on the 2016 survey results, the estimated percentage of subject motor carriers with random controlled substance and alcohol testing programs in place is 89 percent, and the estimated percentage of all CDL drivers participating in such programs is 88 percent.

## NON-RANDOM TESTING

Estimates of positive drug usage rates for the pre-employment screening and post-crash, non-random testing categories are shown in Table 1. Estimated rates from non-random alcohol testing are shown in Table 2.

With the possible exception of pre-employment drug testing, the sample sizes achieved in the survey

for the various non-random testing categories are much lower than those achieved for random testing. As a result, the estimated precision levels for many of these estimates are low, and caution should be exercised when interpreting these estimates. Generally speaking, given the achieved levels of precision in the 2015 and 2016 estimates, year-to-year differences in non-random testing rates between these two years cannot be shown to be statistically significant.

Where the estimated rate or standard error is recorded as 0.0 percent in the tables, negligible or no drug or alcohol use was recorded in the sample for that particular category. In such cases, the actual positive rate for the population is, in all likelihood, greater than zero, but the sample size was inadequate to produce a more precise estimate.

**Table 1. Estimates of random and non-random drug usage rates among CDL drivers, 2014–16.**

Category	2014 Est.	2014 S.E.	2015 Est.	2015 S.E.	2016 Est.	2016 S.E.
<b>Random Testing:</b>						
Any Drug	0.9%	0.1%	0.8%	0.1%	0.7%	0.1%
<b>Non-random Testing:</b>						
Pre-employment	1.3%	0.2%	1.5%	0.1%	1.0%	0.08%
<b>Non-random Testing:</b>						
Post-crash	1.5%	0.5%	4.5%	2.7%	5.2%	3.7%

Est. = Estimate; S.E. = Standard Error

Source: Analysis Division, FMCSA, U.S. Department of Transportation (USDOT).

**Table 2. Estimates of random and non-random alcohol usage percentage rates among CDL drivers, 2014–16.**

Category	2014 Est.	2014 S.E.	2015 Est.	2015 S.E.	2016 Est.	2016 S.E.
<b>Random Testing:</b>						
(≥0.04 BAC)	0.08%	0.02%+	0.08%	0.04%+	0.03%	0.004%+
<b>Non-random Testing:</b>						
Pre-employment	0.0%+	0.0%+	0.3%	0.3%	0.00%	0.00%+
<b>Non-random Testing:</b>						
Post-crash	0.6%	0.6%+	1.8%	1.3%	0.7%	0.65%

Est. = Estimate; S.E. = Standard Error

+ No or negligible usage among sample cases; standard error was too low or negligible.

Source: Analysis Division, FMCSA, USDOT.