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2026 Psychemedics Transportation Industry Insights Report

Beyond Compliance: Drug Trends, Detection Gaps, and Safety Risk in Transportation



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Transportation remains one of the most safety-sensitive sectors in the American workforce. Every decision made behind the wheel, in the cab, on the rail, in the cockpit, or at sea carries immediate public safety implications. As drug potency increases, legalization expands, and synthetic compounds proliferate, the risk environment facing transportation employers has become more complex than at any time in the past decade.

The 2026 Psychemedics Transportation Insights Report provides a data-driven analysis of long-term drug use trends across transportation segments using proprietary hair testing data and external research from federal agencies, academic studies, and industry safety groups.

Key themes emerge:

- **Transportation positivity rates remain material,** even after modest declines from 2022 peaks. Chronic and lifestyle drug use continues to present a measurable risk in safety-sensitive roles.
- **Hair testing continues to detect significantly more drug users than urine testing.** New 2026 Trucking Alliance research analyzing more than 1.22 million pre-employment drug screens found hair testing detected 9x more drug users overall from 2017-2025 and 12x more in 2025 alone.
- **Stimulant use remains a persistent concern in rail and long-haul operations,** consistent with broader national trends showing high-purity methamphetamine and cocaine resurgence.
- **Cannabis legalization and hemp-derived THC variants such as Delta-8 continue to create compliance confusion,** particularly within DOT-regulated roles where federal prohibition remains unchanged.

External research reinforces the urgency:

- The CDC continues to report synthetic opioids as the leading driver of overdose deaths in the United States.
- National Institute on Drug Abuse data confirms increasing drug potency across multiple classes.
- Studies have shown measurable increases in workplace injury rates in states following recreational marijuana legalization, complicating safety oversight for multi-state carriers.

The convergence of higher-potency drugs, regulatory ambiguity, and evolving consumer access has created a visibility gap in transportation safety programs. The detection gap is measurable. Across nine years of Trucking Alliance data, 33,527 CDL applicants tested positive by hair compared with just 3,677 by urine. Short-window testing provides a snapshot of recent exposure; hair testing provides visibility into sustained and intermittent drug use patterns before an individual enters a safety-sensitive role.

For transportation leaders, the issue is no longer whether drug use exists in the workforce; the data confirms it does. The critical question is whether existing testing strategies are robust enough to detect it.

This report equips safety directors, compliance leaders, and executive teams with the data, research context, and strategic insights needed to strengthen drug-free workplace programs and proactively mitigate operational risk in 2026 and beyond.

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Introduction

Safety, Compliance, and Visibility in a Changing Drug Landscape

Transportation is unlike any other industry. The consequences of impairment are immediate, measurable, and often irreversible. A single lapse in judgment can result in multi-vehicle collisions, hazardous material spills, rail derailments, catastrophic liability exposure, and loss of life.

For decades, drug testing has served as a foundational safeguard within transportation safety programs. Yet, the drug landscape facing today's carriers, rail operators, and logistics companies has changed drastically.

Three structural shifts now define the modern risk environment:

1. Potency Escalation
Today's marijuana products contain significantly higher THC concentrations than prior decades. Synthetic opioids such as fentanyl remain the dominant driver of overdose deaths nationally. Methamphetamine and cocaine purity levels are at historic highs. These are not the drugs of 10 or 20 years ago, and the impairment profile is more severe and less predictable.

2. Emerging and "Legal" Impairing Substances
Hemp-derived cannabinoids (Delta-8, Delta-10), Kratom products containing 7-Hydroxymitragynine (7-OH), and other synthetic compounds are increasingly accessible through gas stations, vape shops, and online retailers. While often marketed as legal or natural, these substances can produce opioid-like or psychoactive effects incompatible with safe vehicle operation.

3. Legalization Complexity and Federal Inconsistency
Recreational cannabis is now legal in nearly half of U.S. states, while marijuana remains federally prohibited, and DOT-regulated safety-sensitive positions remain subject to zero-tolerance standards. Multi-state carriers must navigate conflicting state protections, federal mandates, and evolving disability accommodation frameworks, all while maintaining uncompromising safety standards.

At the same time, new research highlights a significant detection gap in traditional transportation testing programs. Researchers from the University of Central Arkansas and the University of Tennessee analyzed more than 1.22 million pre-employment hair and urine drug screens from Trucking Alliance carriers between 2017 and 2025. Hair testing identified 9x more drug users overall and 12x more in 2025 alone.

The implications extend beyond compliance. Across the nine-year study, 22,527 CDL applicants tested positive by hair, including significantly more cocaine, amphetamine/methamphetamine, and opioid users than urine testing identified. Because positive hair results cannot currently be reported to the federal Drug and Alcohol Clearinghouse, these drivers may remain eligible to pursue safety-sensitive positions with carriers relying solely on urine testing.

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The 2026 Psychemedics Transportation Insights Report analyzes five-year positivity trends within transportation, examines emerging drug threats relevant to safety-sensitive roles, and integrates national research to provide context around potency, impairment, and enforcement realities.

Unlike short-window testing methods that capture only recent exposure, hair testing provides a 90-day detection window, enabling employers to identify chronic, lifestyle, and intermittent drug use patterns that may otherwise remain hidden.

As regulatory pressures evolve and drug potency accelerates, transportation leaders face a critical question:

Is your testing program aligned with today's risk environment, or yesterday's?

The report provides the data and insight needed to answer that question with confidence.

Key Findings

Drug-Use Remains Present in Safety-Sensitive Roles
In 2025, overall positivity rates confirm that sustained drug use continues within transportation workforces. Even moderate positivity levels carry significant operational and public safety implications.

Stimulants and Marijuana Drive Ongoing Risk
Cocaine, methamphetamine, and marijuana remain the leading contributors to positive results. In fatigue-intensive environments, stimulant misuse and high-potency cannabis increase the likelihood of impaired judgment, delayed reaction time, and risk-taking behavior.

Synthetic Opioids Elevate Impairment Severity
Fentanyl and emerging synthetic opioids continue to pose national safety concerns. Opioid impairment, particularly when combined with other substances, directly impacts coordination, alertness, and response time in commercial operations.

Poly-Substance Use Amplifies Safety Exposure
Multi-drug combinations increase unpredictability and the risk of sudden incapacitation. In transportation, compound impairment presents disproportionate liability and accident potential.

Pre-Employment Hair Testing Identifies Risk Urine Testing Misses
New Trucking Alliance research analyzing more than 1.22 million pre-employment drug screens found hair testing detected 9x more drug users overall from 2017-2025 and 12x more in 2025. For transportation employers, the data reinforces the value of identifying sustained drug use before an individual enters the cab or assumes a safety-sensitive role.

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Current Drug Trends

The Most Significant Impairment Risks Facing Transportation

The drug landscape affecting transportation in 2025-2026 is defined less by novelty and more by intensity. Higher potency, wider availability, and multi-drug use patterns are increasing impairment in safety-sensitive roles. Below are the five trends most relevant to transportation employers.

1. High-Potency Cannabis in a Legalized Environment

Marijuana remains one of the most commonly detected substances in transportation testing. However, today's products contain significantly higher THC concentrations than in prior decades, particularly concentrates and vapes.

At the same time, recreational legalization continues to expand at the state level, creating confusion among workers despite unchanged federal DOT zero-tolerance standards.

For drivers and rail operators, impairment may include slowed reaction time, reduced hazard perception, and delayed decision-making; risks that directly impact roadway and rail safety.

2. Stimulant Use in Fatigue-Driven Roles

Cocaine and methamphetamine purity levels remain historically high nationwide. In long-haul and fatigue-intensive environments, stimulants are sometimes used to extend alertness.

While stimulants may temporarily increase wakefulness, they also increase risk-taking behavior, aggressive driving, cardiovascular strain, and crash-related fatigue once the drug effect declines.

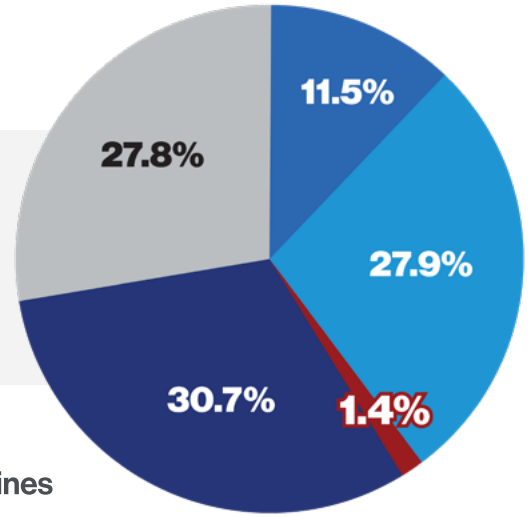
The detection gap is particularly pronounced for stimulants. In 2025 Trucking Alliance pre-employment data, hair testing identified 841 cocaine positives

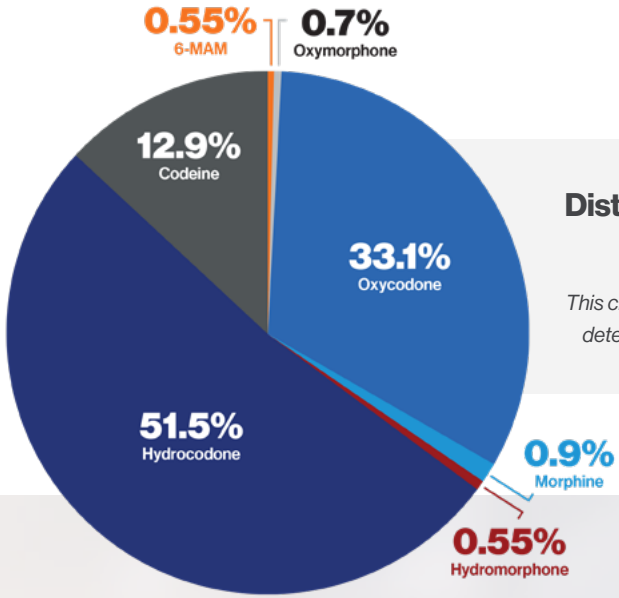
2025 Positive Rate for Drugs Tested

Overall Positive Rate:
5.7%

Distribution of Positives by Drug Class

This chart represents the composition of the overall positive rate in each drug class for which was tested.





Distribution of Positives by Opioids

This chart represents analytes present and detected during the screen for Opioids.

compared with 17 by urine (~23x more users) and 384 amphetamine/methamphetamine positives compared with 31 by urine (~12x more users). These findings suggest traditional short-window testing may significantly understate stimulant use among CDL applicants.

For transportation operations dependent on sustained focus and stable judgment, stimulant misuse remains a measurable safety concern.

3. Synthetic Opioids and Counterfeit Pills

Synthetic opioids, including fentanyl and emerging compounds, continue to drive overdose deaths nationally. Increasingly, these substances are found in counterfeit pills sold as legitimate medications.

Even low-level opioid use can impair reaction time, coordination, and alertness. When combined with other substances, impairment becomes less predictable and more dangerous in safety-sensitive roles.

4. Legal but Impairing" Substances: Delta-8 and Kratom

Hemp-derived THC variants such as Delta-8 and products containing 7-Hydroxymitragynine (7-OH), the active metabolite in certain Kratom products, are widely available in gas stations, truck stops, and online marketplaces.

Often marketed as legal or natural alternatives, these substances can produce psychoactive or opioid-like effects that are incompatible with safe vehicle or equipment operation.

Legal availability does not eliminate the risk of impairment.

5. Rise of Poly-Substance Use

One of the most concerning trends across safety-sensitive sectors is the increase in multi-drug combinations.

Stimulants paired with marijuana, opioids combined with benzodiazepines, or synthetic compounds layered with traditional substances amplify impairment severity and unpredictability. For transportation employers, poly-substance use presents a compounding risk, increasing the likelihood of poor judgment, slowed response time, and sudden incapacitation.

Why This Matters

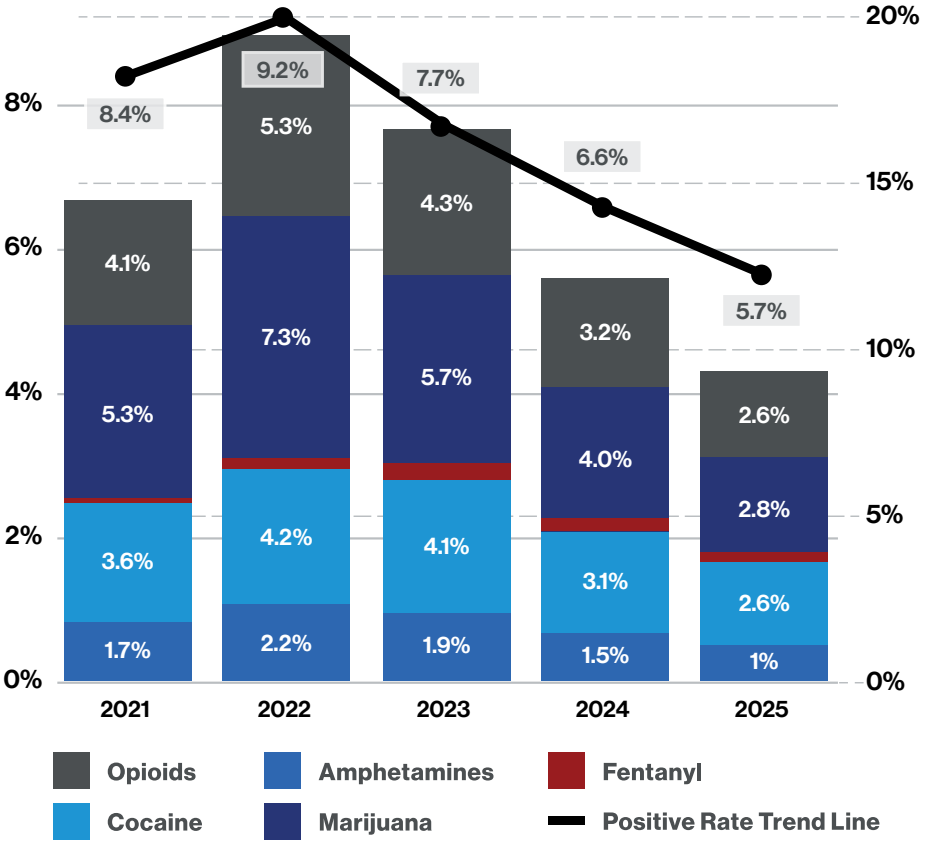
Transportation operates on a narrow margin for error. As drug potency increases and new products enter the market, the intensity and unpredictability of impairment rise.

While positivity rates in some segments have moderated since 2022 peaks, sustained and lifestyle drug use remains present within the transportation workforce. Identifying these patterns, before they manifest on the road or rail, is central to effective risk mitigation.

In today's environment, safety depends not only on compliance but on visibility.

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5-Year Lookback | By Drug Type



The "y" axis on the chart represents % Positive Results (Total Number of Positives / Total Processed Volume).

The trend line spanning all bars in the chart represents the overall percentage of positive results year-over-year. The bar charts reflect the share of a specific drug class in the overall positive test results for a year (Number of Drug Class Positives / Total Number of Positive Results). This chart can serve as a benchmark for continuous improvement of protocols and processes.

Interpreting the Data

Several important observations emerge from the 2025 results:

- Positivity has moderated from 2022 highs but remains elevated relative to pre-pandemic levels. Improvement does not equate to elimination of risk.
- Sustained use, not just recent exposure, drives these findings. Given the 90-day detection window of hair testing, these rates reflect longer-term patterns rather than isolated events.
- Even single-digit positivity carries a disproportionate safety impact. In safety-sensitive industries, the threshold for concern is not double digits. A small percentage of impaired operators can generate outsized operational and reputational consequences.

Operational Implications

For transportation leaders, the 2025 data reinforces a critical reality:

Drug use remains present within the workforce, and the intensity of modern substances increases impairment severity even at stable positivity levels.

The key issue is not whether positivity moves up or down in a single year; it is whether testing programs identify risk before it enters the workforce. In 2025 alone, Trucking Alliance data showed 2,681 positive hair tests compared with just 221 positive urine tests among pre-employment screens. For transportation employers, the detection method can materially determine which drug users are missed.

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Hair Testing: Benefits and Advantages

Hair testing for drug use offers several key benefits and advantages over other testing methods such as urine or blood tests. In this section, we will delve into the details of these benefits and explain why hair testing is considered a superior method for detecting drug use in the workplace.

Longer Detection Window: One of the most significant advantages of hair testing is its longer detection window compared to other methods. While urine tests can typically detect drug use within the past few days, hair testing can detect drug use over a much longer period, typically 90 days or even longer depending on the length of the hair sample. This longer detection window provides a more comprehensive view of an individual's drug use history, making it more difficult for individuals to conceal recent drug use.

Accuracy: Hair testing is known for its high level of accuracy. The process of drug incorporation into the hair is well understood, and the testing methods are highly sensitive and specific. The accuracy of hair testing makes it a reliable tool for employers seeking to maintain a drug-free workplace.

Non-Invasive: Unlike blood tests, which require a needle stick, or urine tests, which require the collection of a urine sample, hair testing is non-invasive and easy to administer. A small sample of hair, typically taken from the scalp, is all that is needed for the test. This makes hair testing a more comfortable and convenient option for both employers and employees.

Deterrent Effect: The knowledge that hair testing can detect drug use over a long period can act as a deterrent for individuals considering using drugs. Knowing that drug use could be detected months after the fact may discourage individuals from engaging in drug use in the first place, leading to a safer and more productive workplace.

Difficult to Cheat: Hair testing is difficult to cheat. While it is possible to adulterate urine samples or use masking agents to try to hide drug use, these methods are much less effective against hair testing. The structure of hair makes it difficult to tamper with, and attempts to do so are usually easily detected by the testing lab.

Comprehensive Testing: Hair testing can detect a wide range of drugs, including marijuana, cocaine, amphetamines, and more. This comprehensive testing capability makes hair testing a versatile tool for employers looking to screen for multiple drugs simultaneously.

Cost-Effective: While hair testing may initially seem more expensive than other testing methods, such as urine testing, it can actually be more cost-effective in the long run. Because hair testing has a longer detection window, employers may be able to conduct fewer tests over time, saving money on testing costs.

Hair testing offers a range of benefits and advantages that make it a superior method for detecting drug use in the workplace. Its longer detection window, high level of accuracy, non-invasiveness, and deterrent effect make it an attractive option for employers seeking to maintain a safe and drug-free workplace.

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Conclusion

Transportation operates with no margin for error. Every mile driven, every rail movement, and every load transported carries public safety consequences.

The 2026 Psychemedics Transportation Insights Report confirms a clear reality: drug use remains present within safety-sensitive workforces. While positivity rates have moderated from 2022 peaks, sustained and lifestyle drug use continues to represent measurable operational risk. At the same time, rising drug potency, expanding legalization, and increasing poly-substance use amplify the severity and unpredictability of impairment. The environment has changed.

Higher-potency cannabis, stimulant resurgence, synthetic opioids, and widely accessible "legal" intoxicants such as Delta-8 and Kratom create a more complex risk profile than traditional compliance models were designed to address. For multi-state carriers operating under evolving state laws and unchanged federal standards, the gap between legality and safety continues to widen. In this landscape, visibility becomes critical. Short-window testing methods identify recent exposure. Long-window testing identifies sustained patterns or use; the most likely to influence long-term safety risk. In transportation, where even a single impaired operator can produce catastrophic consequences, that distinction matters.

Ultimately, the question for transportation leaders is not whether drug use exists; the data confirms it does. The question is whether existing safety programs are structured to detect modern risk patterns before they result in accidents, injuries, or regulatory exposure.

Protecting drivers, operators, passengers, freight, and the public requires more than regulatory compliance. It requires proactive risk identification, data-driven decision-making, and testing strategies aligned with today's drug landscape.

In transportation, safety is not theoretical. It is operational. And it demands clarity.

About Psychemedics

Psychemedics is a global provider of hair testing for drugs of abuse, with over 30 years of experience serving safety-sensitive industries, including transportation.

Methodology
Hair testing is based on a well-established biological process. When drugs are consumed, parent compounds and metabolites enter the bloodstream and are incorporated into the growing hair shaft. As hair continues to grow, it creates a stable, long-term record of drug use.

The graphic below illustrates the four key stages of drug incorporation into hair:



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Methodology

Because incorporation occurs internally, hair testing is resilient to dilution, substitution, and many common evasion tactics. Unlike short-window methods that detect only recent exposure, hair testing provides approximately a 90-day detection window, offering visibility into sustained or lifestyle use patterns.

Each sample undergoes a controlled laboratory process that includes decontamination washing, screening, confirmation testing, and certified review. This multi-step workflow ensures accuracy, specificity, and defensible results across major drug classes, including marijuana, cocaine, amphetamines, opioids (including fentanyl), benzodiazepines, and emerging synthetics.

Why It Matters in Transportation

In safety-sensitive roles, recent-use testing alone may not provide a complete risk profile. Hair testing delivers longer-term visibility into drug use patterns, helping transportation employers strengthen hiring standards, support compliance efforts, and reduce preventable safety risk.

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