



2019–2020 NTSB

MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS



End Alcohol and Other Drug Impairment

What is the problem?

The use of mood- or mind-altering substances has increased dramatically in the U.S. population, and there is evidence that substance use—including over-the-counter (OTC), prescription, and illicit drugs—is increasing in commercial rail and highway operations, as well. The legalization of recreational marijuana use in some states adds new complexity and risk to transportation safety—the impact of which has yet to be fully understood. The opioid crisis that is plaguing the country has led to the expansion of the Department of Transportation (DOT) drug testing panel for DOT-regulated industries. Drug manufacturers are rapidly altering the chemical makeup of illicit designer drugs at such a high rate that they are evading regulation and detection.

Many drugs have performance-impairing effects, but determining the relationship between the presence of a drug in one's body and its effect on that person's ability to safely operate a vehicle can be challenging. Unlike alcohol, the diversity of other drugs makes understanding their effects on human performance an ongoing and challenging task.

In several of our recent investigations, we have also seen the tragic consequences of alcohol mixed with other drugs.

But drug impairment isn't just an illicit drug issue—prescription and OTC medications can also impair drivers. Between 2001 and 2003, the Federal Motor Carrier Safety Administration (FMCSA) and the National Highway Traffic Safety Administration conducted a *Large Truck Crash Causation Study* and found that 26 percent of truck crashes were associated with prescription drug use, 17 percent with OTC drug use, and 2 percent with illegal drug use.

In 1990, we published a safety study, *Fatigue, Alcohol, Other Drugs, and Medical Factors in Fatal-to-the-Driver Heavy Truck Crashes*, in which we analyzed 182 crashes and made several recommendations, including that postaccident toxicological specimen collection, testing, and reporting be standardized.

Analysis of Federal Railroad Administration data revealed that



26%
Large truck fatal crashes occurring between 2001–2003, where prescription drug use was a factor
Source: FMCSA

4.2%
Railroaders involved in accidents in 2016 testing positive for drugs
Source: FRA

On June 25, 2015, a truck driver impaired by methamphetamines collided with eight vehicles in a workzone near Chattanooga, Tennessee, killing six people.

4.2 percent of railroad employees involved in accidents in 2016 tested positive for drugs such as marijuana, cocaine, ecstasy, benzodiazepine, oxycodone, and morphine—up from 2.9 percent in 2015.

In our 2007 investigation of a Massachusetts Bay Transportation Authority passenger train strike against a track maintenance vehicle in Woburn, Massachusetts, we found evidence of impairment of maintenance-of-way employees. Postaccident test data for fatally injured railroad employees indicated greater alcohol and other drug use among maintenance-of-way employees than among railroad employees subject to random and postaccident testing requirements.

Related reports:

HAR-16/01: Multivehicle Work Zone Crash on Interstate 75; Chattanooga, Tennessee; June 25, 2015; Accident ID HWY15MH009

HAR-15/03: Truck-Tractor Semitrailer Median Crossover Collision with Medium-Size Bus on Interstate 35; Davis, Oklahoma; September 26, 2014; Accident ID HWY14MH014

RAR-08/01: Collision of Massachusetts Bay Transportation Authority Train 322 and Track Maintenance Equipment; Woburn, Massachusetts; January 9, 2007; Accident ID DCA07FR006

For detailed investigation reports, visit www.nts.gov

Continued on next page



HIGHWAY



RAILROAD

What can be done?

Accidents and crashes caused by drug-impaired operators are 100 percent preventable. In addition to conducting preemployment drug screening, consistent postaccident toxicology testing to determine the prevalence of impairing substance use among operators will help clarify the problem in all modes. For many years, we have investigated operator impairment in accidents and issued many recommendations to address the problem in all transportation modes.

To address the problem of impairment in commercial operations, the following actions should be taken:



RAILROAD

Regulators

- › Establish comprehensive toxicological testing requirements to identify the role played by common prescription and OTC medications.
- › Revise the definition of “covered employee” for purposes of mandatory alcohol and controlled substances testing programs to encompass all employees in safety-sensitive positions.
- › Develop medical certification regulations for employees in safety-sensitive positions that include sleep disorder screening, standardized testing protocols, and centralized certification oversight for those who fail testing.

Industry

- › Develop and publish an easy-to-understand source of information for train-operating crewmembers on the hazards of using specific medications when performing their duties.

Operators

- › As an employee performing safety-sensitive functions in the transportation industry, you should provide a safe work environment for your coworkers and the traveling public. Creating a safe work environment not only means following established work rules but also following the DOT’s rules on drug use and alcohol misuse.

- › Consider the effects of your prescription medicine. It could be making you drowsy or otherwise reducing your decision-making abilities. Ask your doctor about any medications they’re prescribing you.



COMMERCIAL HIGHWAY

Regulators

- › Develop and disseminate to appropriate state officials a common standard of practice for drug toxicology testing, including the circumstances under which tests should be conducted, a minimum set of drugs for which to test, and cutoff values for reporting the results.
- › Determine the prevalence of commercial motor vehicle driver use of impairing substances.
- › Work with motor carrier industry stakeholders to develop a plan to help motor carriers address driver use of impairing substances.
- › Determine the prevalence of commercial motor vehicle driver use of impairing substances, particularly synthetic cannabinoids, and develop a plan to reduce the use of such substances.
- › Disseminate information to motor carriers about using hair testing as a method of detecting the use of controlled substances, under the appropriate circumstances.

Industry

- › Inform members about the dangers of driver use of synthetic drugs and encourage them to take steps to prevent drivers from using substances that could affect their driving performance or safety.

Drivers

- › Don’t drive after drinking alcohol or after using any substance that can impair your performance. Be aware that not just illegal substances can be impairing, but some prescription and OTC medicines can also affect how you drive.

MWL
MOST WANTED LIST

Critical changes needed to reduce transportation accidents, injuries, and fatalities

- twitter.com/ntsb #NTSBmwl
- facebook.com/ntsbgov
- youtube.com/user/ntsbgov
- instagram.com/ntsbgov
- flickr.com/photos/ntsb

NTSB | National Transportation Safety Board

The NTSB **MOST WANTED LIST** highlights safety issues identified from the NTSB’s accident investigations to increase awareness about the issues and promote recommended safety solutions.

For more information visit www.nts.gov/mostwanted or contact SafetyAdvocacy@ntsb.gov

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the federal government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

National Transportation Safety Board | 490 L’Enfant Plaza, SW | Washington, DC 20594 | (202) 314-6000