What is the issue?

The use of over-the-counter (OTC), prescription, and illicit drugs is increasing in the United States. Many drugs have impairing side effects, and determining the relationship between a drug's presence in the body and an individual's ability to operate an airplane is very complex. Because drugs other than alcohol can affect individuals differently, tackling drug-impaired vehicle operation is a particularly challenging endeavor, and we are increasingly concerned about the possible safety implications of drug use trends in all modes of transportation.

Contrary to common assumptions, impairment isn't just a highway problem; we see impairment-related accidents in all modes of transportation. In aviation, most fatal accidents involving drug use occur in general aviation (GA) aircraft. A 2014 National Transportation Safety Board report, "Drug Use Trends in Aviation: Assessing the Risk of Pilot Impairment," showed increasing trends in pilots' use of all drugs, potentially impairing drugs, drugs used to treat potentially impairing conditions, drugs designated as controlled substances, and illicit drugs. Although evidence of illicit drug use was found only in a small number of cases, the percentage of pilots testing positive for marijuana use increased during the study period, mostly in the last 10 years.

The 2014 study showed that the prevalence of potentially impairing drugs in fatally injured accident pilots increased from an average of 11 percent during the period from 1990 to 1997 to an average of 23 percent during the period from 2008 to 2012. During the same time periods, positive marijuana results increased from 1.6 percent to 3.0 percent. The most commonly found impairing substance in fatal crashes was diphenhydramine, a sedating antihistamine found in OTC medications.

In most modes of transportation, data about operator drug use is limited to a small portion of operators and a short list of drugs. Aviation is the one mode in which the regulatory authority, the Federal Aviation Administration (FAA), routinely conducts extensive post-accident toxicology testing on fatally injured pilots.

What can be done?

To date, the FAA has identified and removed more than 50,000 safety-sensitive employees from the aviation industry for drug and alcohol...
violations, in addition to carrying out other enforcement activities like issuing civil penalties and suspending and revoking certifications.

Unfortunately, initiatives are underway to reduce the medical certification requirements for GA pilots, which may increase the risk of accidents in that segment of the industry by making it less likely GA pilots will be flagged for drug or alcohol use.

Pilots should be familiar with the Aeronautical Information Manual’s “IM SAFE” checklist, which helps pilots assess and verify that they are healthy and fit for flight. The checklist includes assessing if various issues, like illness, medication, alcohol, may impair their ability to fly safely.

Pilots taking any medication should talk to their pharmacist, aviation medical examiner, or private physician to determine the effects of those medications and whether there are any dangerous interactions that can occur when using multiple medications. Additionally, they should read the package warnings for all medications, heed the warnings, and not fly after taking sedating and impairing medications until the condition they are treating has resolved and they are no longer experiencing the adverse effects of the medication. Finally, to ensure the adverse effects of a medicine have resolved, pilots should follow the FAA recommended minimum wait times between the last dose of the medication and performing pilot duties, which is 5 times the maximum dosing interval.

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.

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.

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

*For detailed accident reports visit www.ntsb.gov