



Predicting Future Crashes

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Recent research, released by the American Transportation Research Institute, reveals driving behaviors that increase the likelihood of future crashes—five of which increased future crash likelihood by more than 100%.

Those five driving behaviors are “strong indicators” of future truck crashes include reckless driving violation, failure to use/improper signal conviction, a past crash, failure to yield right-of-way violation, and an improper or erratic lane changes conviction.

While five behaviors have been highly consistent among reports from 2005 to 2022, the research indicated there are 25 different violations and convictions which increase the likelihood of future crashes. Other leading risks recently noted included convictions for failure to obey a traffic sign or signal, failure to keep in the proper lane, improper lane change, being in an improper lane or location and reckless or careless driving.

The ATRI study involved data from 2017 through 2018, due to a delay in FMCSA reporting, covering nearly 584,000 truck drivers and 38,797 crashes.

This data may provide a way to mitigate the recent unexpected increase in truck crashes. According to the National Highway Traffic Safety Administration (NHTSA), 42,915 people died last year in motor vehicle crashes—a 10.5% increase from the 38,824 fatalities in 2020. Fatalities in crashes involving at least one large truck were up 13% last year. The projection is the highest number of fatalities since 2005 and the largest annual percentage increase in the Fatality Analysis Reporting System’s history, according to NHTSA. Data reported by the Federal Highway Administration shows that vehicle miles traveled in 2021 increased by about 325 billion miles, or about 11.2%, compared to 2020.

The new ATRI Crash Predictor study found males were 76% more likely to receive a seat-belt violation, 57% more likely to receive a conviction for driving too fast for conditions, 19% more likely to receive a conviction for speeding more than 15 miles per hour above the speed limit, and 14% more likely to be involved in a crash.

Finally, the report includes an updated list of the 10 top states for truck safety, which are ranked by the relationship between traffic enforcement inspections and crashes. Washington state was the top-ranked state, followed by Indiana, New Mexico, Arizona, and Massachusetts. Three states joined the top-tier list for the first time: Massachusetts, Georgia, and Pennsylvania.

Only four states—Alaska, North Dakota, Vermont, and Wyoming—had fewer truck-involved crashes between the last ATRI report in 2018 and the new one, pointing to an increase overall in truck-involved mishaps and a need for more traffic enforcement. However, 10 states aren’t inspecting trucks as much: Hawaii, Alaska, South Dakota, Montana, New Hampshire, Kentucky, Connecticut, Missouri, New York, and Maryland, pointing to an enforcement gap.

“With the recent unexpected increase in truck-involved crashes in the U.S., it becomes more important than ever to understand both the underlying causes and attributes of these crashes as well as targeted strategies for mitigating the crashes,” ATRI’s 2022 Crash Predictor report concludes.