



Negative safety performance KPIs and crash rates may establish “Patterns in Practice” that increase the risk of “Nuclear Verdicts” from severe crashes involving company-owned and operated vehicles.

Using Predictive Analytics as a Defense in Severe Vehicle Crashes to Prevent Nuclear Verdicts

June 2023

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Risk Report

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Introduction

Nuclear verdicts (jury verdicts awarding more than \$10 million) from fatal crashes involving large trucks have increased more than 400% in the past five years. According to Holman Fenwick Willan Law Firm, in Texas there have been five \$100,000,000+ verdicts in two years and 57 verdicts over \$10,000,000 in the past five years.

Media coverage of crash rates and the total number of crashes involving large trucks has experienced growing sensationalism, and we are seeing that juries are sending a clear message to trucking company leadership: *“If your trucks injure somebody and you demonstrate lack of care and concern, we will punish your company.”*

The number of fatalities involving large trucks have increased 33% since 2011 according to the National Safety Council Accident Facts annual report. Large trucks represent just 4% of all vehicles but account for 9% of all fatality crashes. While some of the increased costs are due to litigation factors that cannot be controlled once the crash occurs, the trucking industry bears responsibility for conditions they are required by law to control.

US litigation funders committed more than \$3.2 billion to lawsuits through mid-2022, a nearly 16% increase from the previous 12-month period, according to Bloomberg Law. The 44 funders have \$13.5 billion in assets under management, according to the fourth annual Westfleet Advisors survey. That was also up by 9%.

The information in this white paper describes the type of safety performance data plaintiff’s attorneys use to demonstrate direct negligence (evidence that you do not care). To lower the risk of “Nuclear Verdicts,” companies must be able to demonstrate how they use safety leading indicators to measure the effectiveness of their safety management system demonstrating that they have a culture focused on safety. This would include:

- Identification of safety management systems to reduce the risk of crashes.
- Identify KPIs (Key Performance Indicators) that predict future crash rates and demonstrate good safety management practices.
- Identify what conditions are controllable by management pre-crash and post-crash.
- Recognize how the plaintiff’s attorneys will use past safety performance to demonstrate direct negligence (evidence that they do not care) as the cause for a serious or fatal injury crash to inflame juries to provide large awards.
- Recognize that just six states (Texas, California, Florida, Illinois, Pennsylvania, and New York) hosted 63% of all nuclear verdict cases.

Executive Summary

U.S. Department of Transportation (DOT) regulators and insurance companies use the DOT SMS (Safety Management System) scores and the Central Analysis Bureau's BASIC (Behavioral Analysis and Safety Improvement Categories) Score as methods of evaluating a company's safety performance for their transportation operations.

When one or more of their BASIC Score is in alert status future crash rates are up to 93% higher than a transportation company with no BASIC's in alert status. This is according to studies conducted by the ATRI (American Transportation Research Institute) and the 2014 Volpe study. The report stated that the behavioral data collected from USDOT-CMS is predictive of future safety performance and crash rates for commercial trucking fleets.

Regulatory agencies such as the DOT, John A. Volpe National Transportation Systems Center, ATRI, American Trucking Institute and CAB (Central Analysis Bureau) collect substantial amounts of publicly available data on the operational risk and safety performance of commercial trucking fleets that fall under DOT rules.

It is important for transportation companies to monitor this data and use it for safety performance improvement. Having access to this data and not using it, increases the exposure to "Nuclear Verdicts."



Chronically poor performance on BASICs scores demonstrates a "Pattern in Practice" that Plaintiff's Attorneys use to brand trucking fleets as "a hazard to the public" and that they must be punished for their actions.

Defense Attorney Garner Berry



Key Performance Indicators

Crash Rates for Non-DOT Fleets

Many companies operate a combination of vehicles including automobiles, light trucks, and heavy trucks that may or may not fall under DOT safety rules and regulations particularly when it comes to tracking safety performance and developing KPIs. **Crash rates for DOT and non-DOT fleets are calculated differently.**

Vehicles with less than 26,001 lbs. gross vehicle weight rating when operating only in-state and below 10,001 if crossing state lines are considered non-DOT.

The crash definition for non-DOT fleet operations is a collision of any type resulting in bodily injury and/or damage to the property of others.

CRASH RATE FORMULA

of crashes per 100 power units = (# of Crashes / # of in-service vehicles*100)

**ABOVE AVERAGE
Performance**

Crash rate < 3

**AVERAGE
Performance**

Crash rate of 3 – 4

**BELOW AVERAGE
Performance**

Crash rate > 4

These crash rates are often used to compare company performance internally between divisional or regional operations.

Crash Rates for DOT Fleets

Commercial fleet operations subject to DOT rules occurs when the GVWR (gross vehicle weight rating) of a vehicle exceeds 26,001 pounds for in-state operations or 10,001 pounds when vehicle trailer combination crosses state lines. The definition of a crash for DOT commercial fleets includes only serious events and does not include claims for property damage only. For a crash to be reportable under DOT, it must include bodily injury or at least one of the vehicles towed away from the crash site.

CRASH RATE FORMULA

Crash Rate = # of crashes per 100 power units (# of Crashes / # of in-service vehicles*100)

Alert status for any of the 7-BASICs means that the trucking companies safety performance places them in the bottom 30% of all trucking operations. BASICs in alert status identify conditions that contribute to “Direct Negligence” – evidence of a systemically poor safety culture.

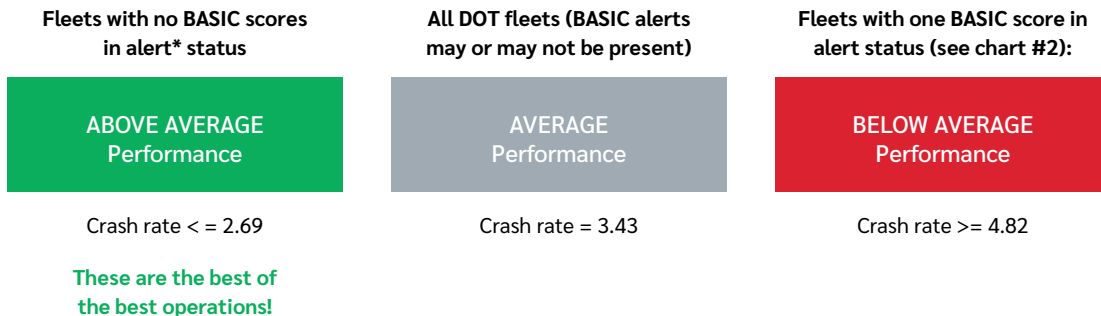
BASICs Scores DOT Fleets

The BASICs scores (Behavioral Analysis and Safety Improvement Categories) are a balance scorecard method using leading indicators to evaluate a company's safety performance that cover seven different management systems.

The seven BASICs KPIs that are predictive of future crash rates are:

- 1. Unsafe driving** – Speeding, lane changes, tailgating, and too fast for conditions.
- 2. Crashes** – Collisions involving injuries or vehicles towed.
- 3. Hours of Service** – Daily driving limitations, tracking of driving time and on duty hours.
- 4. Vehicle Maintenance** – Road worthiness and condition of the vehicles and trailers.
- 5. Controlled substances** – Driving under the influence of drugs/alcohol.
- 6. Safe transport of hazardous materials** – Placarding, proper driver training and licensing.
- 7. Driver Fitness** – Medically evaluated to assure drivers are fit for duty.

The Volpe Study completed for the FMCSA (Federal Motor Carrier Safety Administration) found that the BASIC scores on average were predictive of future crash rates:



Just one BASICs in alert status can indicate crash rates up to 93% higher on average than a fleet with no BASICs in alert status.

What Drives Nuclear Verdicts?

A NUCLEAR VERDICT IS ONE WHICH IS MORE THAN \$10 MILLION. Plaintiff's attorneys have said that "Patterns in Practice" will contribute to "Nuclear Verdicts" when there is a history of neglect, systemic safety misconduct or failure to implement safety solutions. The Plaintiff's attorney will sell that history to the jury members, encouraging the jury to send a message to the company and punish them for being a danger to their family and friends.

Uncontrollable Conditions

“ *The defense intends to focus on the 30 seconds before the crash. And when I handle a case, I look long before that. I look at how he was hired, how he was trained, and how he was supervised.* ”

A Plaintiff's Attorney

Litigation Conditions

These are conditions that influence the jury to award large damages to the Plaintiff.

The conditions listed below are known to significantly increase the risk of a Nuclear Verdict. Recognizing these conditions is critical to understanding a company's exposure to a Nuclear Verdict..

- Catastrophic Injuries – Spinal, Traumatic Brain Injuries (TBI) Deaths
- Injury to a child
- Perception of deep pocketed defendants
- Third party litigation funding – Private Equity Firms
- Mass advertising on Litigation
- Expert witnesses' testimony
- State Courts produce more Nuclear Verdicts than Federal Court
- Systemically poor safety performance evidenced by DOT safety violations and BASICs scores in alert status
- Perception of “profits over people”
- Social inflation

“ **HEADLINE TAKEN FROM 60 MINUTES “NEWSMAKERS”** ”

Litigation Funding: A multibillion-dollar industry for investments in lawsuits with little oversight

Article by Leslie Stahl

Controllable Conditions



The plaintiff attorneys attempt to have the jury set the standard and unfortunately, whatever you do is not enough... There is no safe harbor for exceeding FMCSRs (Federal Motor Carrier Safety Regulations).

Motor Carrier Senior Vice President of Safety

Predictive Analytics

A transportation company has control over these conditions that are predictive of future crash rates. It is critical for a company to use this information to improve operations. If not, the plaintiff attorneys will use it to demonstrate negligence.

- What does your safety policy dictate you do? Do you follow it consistently?
- Do you have a culture that demonstrates continuous improvement?
- Are your vehicles equipped with Telematics/IVMS (In Vehicle Monitoring Systems) – GPS and Camera data?
- Can you demonstrate consistent use of the data for improvement?
- Can you demonstrate control of the operations contributing to BASICS scores?

THERE SHOULD NOT BE ANY BASICS IN “ALERT STATUS” SUCH AS:

- 1. Unsafe Driving** – Speeding, lane changes, tailgating, too fast for conditions
- 2. Crashes** – Collisions involving injuries or vehicles towed
- 3. Hours of Service** – Daily driving limitations, tracking of driving time and on duty hours
- 4. Vehicle Maintenance** – Road worthiness and condition of the vehicles and trailers
- 5. Controlled Substances** – Driving under the influence of drugs/alcohol
- 6. Safe Transport of Hazardous Materials** – Placarding, proper driver training and licensing
- 7. Driver Fitness** – Medically evaluated to assure fit for duty

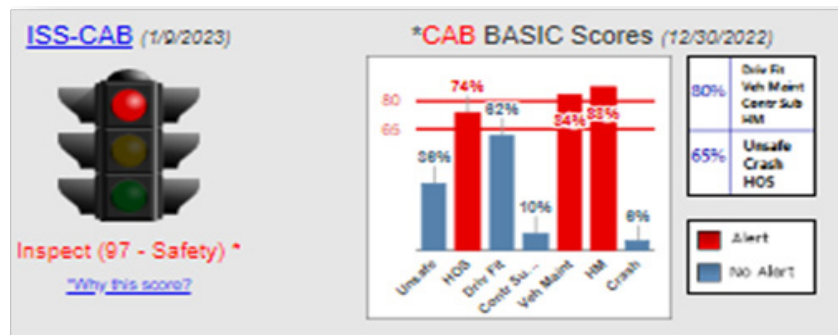
The attorneys will use the safety performance records (telematics, DOT SMS/CAB data, lack of improvement) to demonstrate that management had prior knowledge of a specific driver or systemic safety culture problems and did not make improvements. This information is used to demonstrate that management does not care, and Plaintiffs’ attorneys may use this to establish direct negligence.



Data Charts: KPIs

CHART #1 – BASICs score defines a “Pattern in Practice”

In this example three of the seven BASICs are in the alert status and the safety score of 97 means that 97% of all other fleet operations have better road-side inspection results and crash rates. This fleet rates at the bottom 3%, an extremely poor performance. Three or more BASICs in alert status are a trigger for a potential DOT Audit. This performance establishes a “Pattern in Practice” of neglect and serious operational problems such as Hours of Service violations, inadequate vehicle Maintenance and violations in the Transport of Hazardous Materials.



The “reptile theory tactics” is a psychological method used to manipulate jurors to reach punitive decisions on favoring the plaintiffs. They will use the “Pattern in Practice” to make jurors feel that their families and their personal safety is threatened by this company’s operations. To protect the public, the jury is urged to send a message through the awarding of damages.

Reptile Theory Tactics – Plaintiff’s Lawyer Playbook

CHART #2 – Leading Indicators: Violations of BASICS Predict Future Crash Rates

The Volpe study determined that the BASICS scores have proven to be predictive of future crash rates. Chart #2 demonstrates the actual BASICS violation results and the observed increase in future crash rates from the Volpe study.

For DOT fleet operations that have at least one of the following BASICS in alert status the actual future crash rates increase by up to 93%. For example, when Hours of Service is in alert status, the future crash rates are 83% higher than average.

BASIC Category	# of Carriers evaluated	Total Power Units (PU)	Total Crashes	Crash Rate (Crashes per 100 PU)	% increase in Crash Rate Compared to Natl. Avg.
Unsafe Driving	9,594	194,756	12,888	6.62	93%
Crash	4,662	246,463	15,638	6.34	85%
HOS Compliance	22,558	343,114	21,462	6.26	83%
Vehicle Maintenance	15,734	234,895	13,261	5.65	65%
Controlled Substances/Alcohol	2,914	44,945	2,070	4.61	34%
HM Compliance	746	250,892	11,266	4.49	31%
Driver Fitness	5,067	323,038	10,047	3.11	-9%

CHART #3 – Top 5-DOT violations with 100% plaintiff’s verdicts

The chart to the right from the US Chamber of Commerce report identifies actual jury decisions and how often the verdict went against the defendant in court. Note that this tracks very closely with the results in the Volpe study completed for DOT, where BASICS in alert status predicted future crash rates.

Issue Brought Against the Defendant in Court	Percent of Plaintiff Verdicts	Number of Cases
HOS/Log Book	100.0%	26
Driver History	100.0%	14
Controlled Substance	100.0%	13
Left Scene of the Crash/Failed to Call 911	100.0%	8
Health Related Issue	100.0%	5
Sleep/Fatigue	91.7%	36
Driver On Their Phone	91.7%	12
Rear End Collision	89.2%	66
Work Zone/Construction	88.9%	18
Unfavorable Hiring Practice	87.5%	24

Conclusions

Key Drivers for Nuclear Verdicts

- The number of truck crashes involving fatalities has been rising for the past 5-years.
- Plaintiff's Attorneys using past safety performance (BASICS scores and DOT SMS scores) to demonstrate a systemically poor safety culture to create fear and the need to punish dangerous companies.
- Failure of company officials to use safety leading indicators to take action to correct preventable conditions that lead to serious crashes.
- The lack of safety improvements indicates a "negative pattern in practice" and is used to establish negligence by plaintiff's attorneys.
- Media coverage sensationalizing truck crashes.
- Mass advertising of litigation.
- Perception of deep pocketed defendants who must be punished for their actions.
- Private Equity firms that are "investing" in funding plaintiff's attorney's cases provide funds for more sophisticated attorneys and expert witnesses.



Time to Take Action

1

Companies must establish and use KPIs (Key Performance Indicators, BASICs scores and SMS scores) that reflect the health of their safety culture and are predictive of future safety performance. Companies must use this predictive data to improve operational safety practices.

SOME OF THE COMPONENTS INCLUDE:

- Using BASICs scores in CAB system or DOT SMS (Safety Management System) as leading indicators to recognize where improvements are required.
- Taking responsibility for improving operations under the 7-BASICs safety criteria.
- BASICs in violation status predict increases in average crash rates. A safety action plan is needed to focus on process improvement.
- Recognizing that hours of service violations, logging violations, driver history of controlled substance violations all result in pro-plaintiff verdicts 100% of the time.
- Build a history of “Positive Pattern in Practice” that can be used as a defense in court to demonstrate good safety management and a good steward of public safety.

2

Companies should support their local legislators and trucking organizations to bring balance to the courtrooms. The U.S. Chamber of commerce chief legal officer recommends legislatures focus on reforms to restore fairness and more predictable jury awards through the following actions:

- Recognize that just six states (Texas, California, Florida, Illinois, Pennsylvania, and New York) hosted 63% of all nuclear verdict cases.
- SEC tells private equity firms to report on litigation finance. The lawsuit funding rules will now force them to report confidentially to the agency the percentage of their capital targeted for use by law firms as part of an investment strategy.
- Require disclosure of third-party litigation funding. (SB-581 in California is a recent example of this disclosure).
- Stop misleading lawsuit ads in the media.
- Promote sound science in the courtrooms.
- Prohibit plaintiffs’ lawyers use of anchoring tactics to influence jury pricing of verdicts.

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