

SmartIQBeat™

DATA INSIGHTS FOR TRANSPORTATION



SNAPSHOT FOR TRUCKING | April 2018

SmartDrive Smart IQ® Beat Snapshots provide in-depth analysis and metrics of top fleet performance trends based on the SmartDrive database of over 220 million analyzed and scored driving events.



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Only video reveals the hidden dangers of speeding.

The SmartDrive SmartIQ *Speeding Drivers Snapshot for Trucking* illuminates key observations that distinguish speeding drivers from all other drivers. The likelihood they will engage in other unsafe driving practices has a direct connection to collisions and fleet costs—drivers recently in a collision speed nearly 69% more than non-collision drivers.

Findings: This analysis demonstrates that speeding drivers are less safe overall and exhibit fundamental driving errors at a significantly higher rate than all other drivers. For instance they are:

- 53% more likely to be involved in a near collision with another vehicle
- 2.5x more likely to not stop at a stop sign and engage in unsafe lane changing

And, it's not just the danger they add to your fleet. They also affect your bottom line. Highway MPG for drivers who speed is 2.7% lower than all other drivers. Read the *Snapshot* for more analysis.

Introduction

Speeding is rampant. And growing. For the first time in nearly a decade, preliminary 2016 data from the National Safety Council estimates that as many as 40,000 people died in motor vehicle crashes last year.¹ That marks a 6% increase over 2015, and a 14% increase over 2014—the most dramatic two-year escalation since 1964—53 years.

Although 83% of drivers surveyed believe speeding is a safety concern, 64% say they are comfortable speeding.² But why? Delivery schedules, weather delays and traffic are among the reasons truck drivers speed. Yet, while it's tempting to drive fast, do the dangers outweigh the benefits?

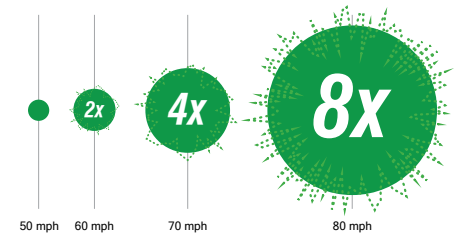
According to the National Highway Traffic Safety Administration (NHTSA):³

- 27% of all fatal automobile crashes involve drivers who were speeding
- Speeding-related fatalities increased by 4% from 2015 to 2016
- 15% of speeding-related fatalities occurred on interstate highways and drivers involved in fatal crashes tend to speed more frequently at night

If a driver is willing to risk speeding, is he or she more likely to take other risks while driving? Because a driver wasn't in a collision today, was he simply lucky in avoiding the collision?

As speed limits increase, do fatalities follow? According to the Insurance Institute for Highway Safety (IIHS), they do. The IIHS study shows that increases in speed limits over two decades have cost 33,000 lives in the U.S.⁴ Driving at an excessive rate of speed decreases the amount of time that a driver has to avoid a crash. Once the crash occurs, it is much more likely to be severe when the vehicles are traveling at a high rate of speed.

The NHTSA reports that the force of a crash's impact doubles with every 10-mile per hour increase in speed at speeds faster than 50 miles per hour. The risk of suffering a serious injury or dying also increases with the higher rate of speed. What other factors are contributing to these collisions and fatalities?



While it's tempting to drive fast, the dangers of excessive speeding don't outweigh the benefits. The additional factors that come with speeding simply add to the dangers. Eliminate speeding and many of these additional factors disappear.

¹ National Safety Council Motor Vehicle Fatality Estimates

² National Safety Council Driver Safety Public Opinion Poll, February 2017

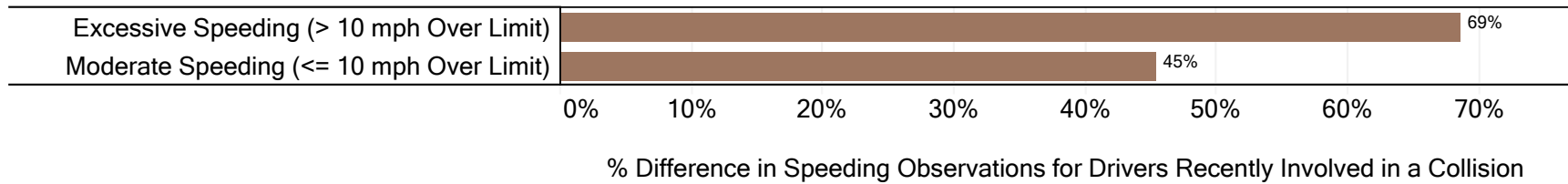
³ NHTSA Traffic Safety Facts DOT HS 812 409 and 812 456

⁴ IIHS Status Report, Vol 51, No. 4

Speeding – Collision vs. Non-Collision

On average, drivers who speed the most are more likely to be in a collision.
Drivers recently in a collision speed excessively at a rate nearly 69% more than non-collision drivers. More than 17% of all fatal crashes are related to speeding.¹

Speeding



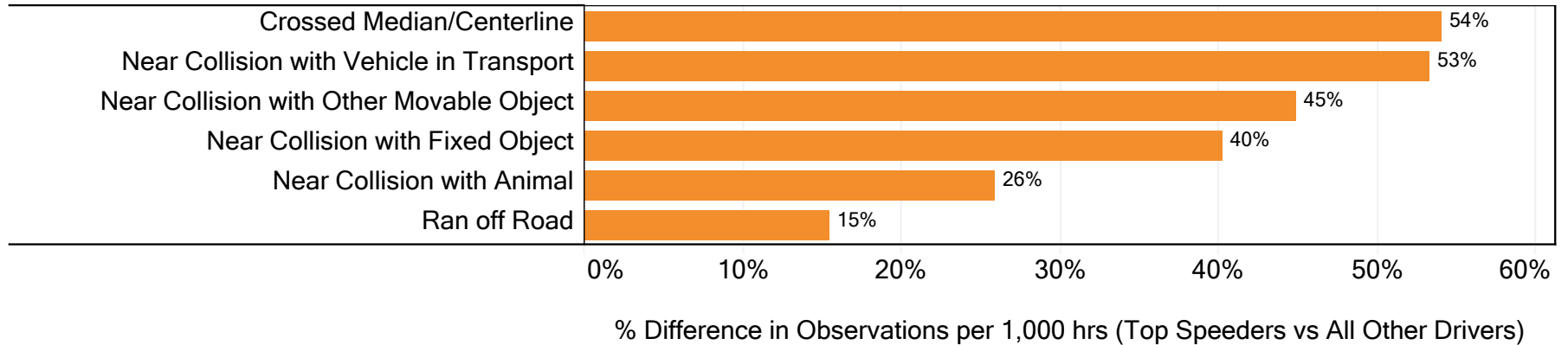
- **Speeding is the most frequent driver-related factor for drivers involved in fatal crashes.** The correlative factors of intersecting collision drivers and their speeding habits is updated here from the previous SmartIQ study released in April, 2017.

¹ U.S. DOT Large Truck and Bus Crash Facts 2015

Speeding – Near Collisions

On average, drivers who speed the most are nearly 45% more likely to be involved in a near collision. Near collisions are a strong indicator of collision risk. Video provides a unique opportunity to see risk before it becomes a collision.

Near Collisions

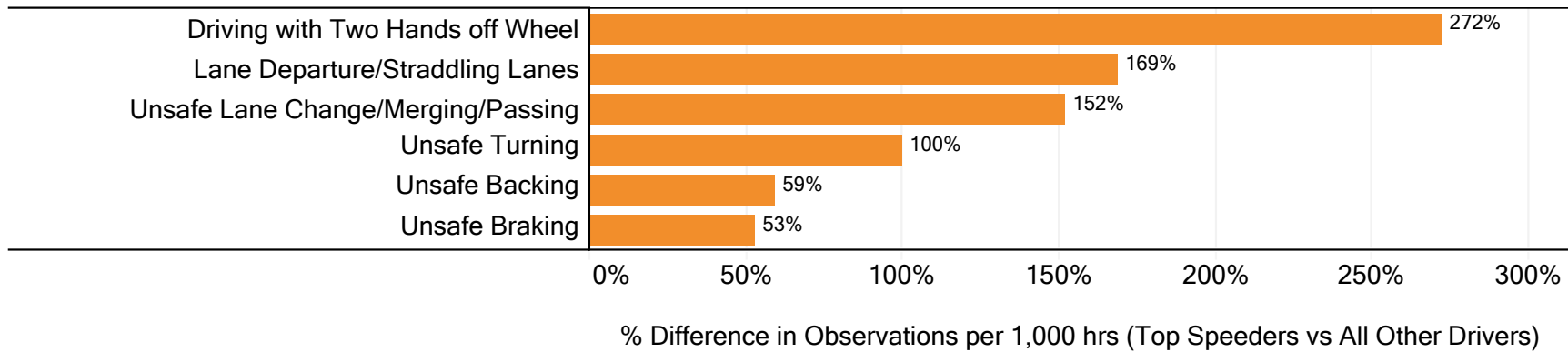


- Top Speeders are **54% more likely** to cross the median or centerline of the roadway.
- Top Speeders are also **53% more likely** to be involved in a near collision with a vehicle in transport than all other drivers.

Speeding – Lane Management/Vehicle Control

Drivers who speed the most are more likely to have poor control of their vehicles. These drivers are more likely to engage in unsafe lane changing/merging, passing, braking and turning. They are also more likely to drive with two hands off the wheel.

Unsafe Vehicle Control

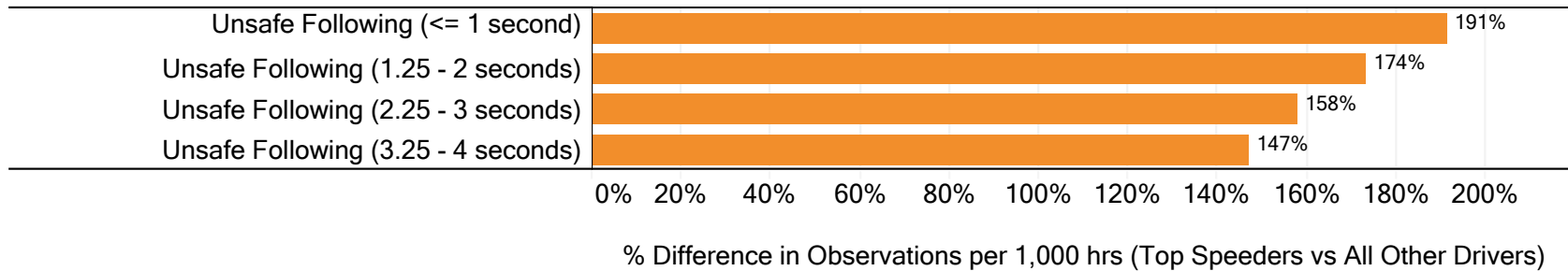


- Top Speeders are **3.7x more likely** to drive with two hands off the wheel.
- Top speeders are nearly **2.7x more likely** to engage in frequent lane departures and straddle lanes.
- Top Speeders are more than **2.5x more likely** to engage in unsafe lane changing than all other drivers. They are also nearly **2x more likely** to engage in unsafe turning.

Speeding – Following Distance

Drivers who speed the most engage in unsafe following at a rate nearly 3x other drivers. For a typical tractor-trailer, FMCSA recommends a 4-second following distance.¹

Unsafe Following



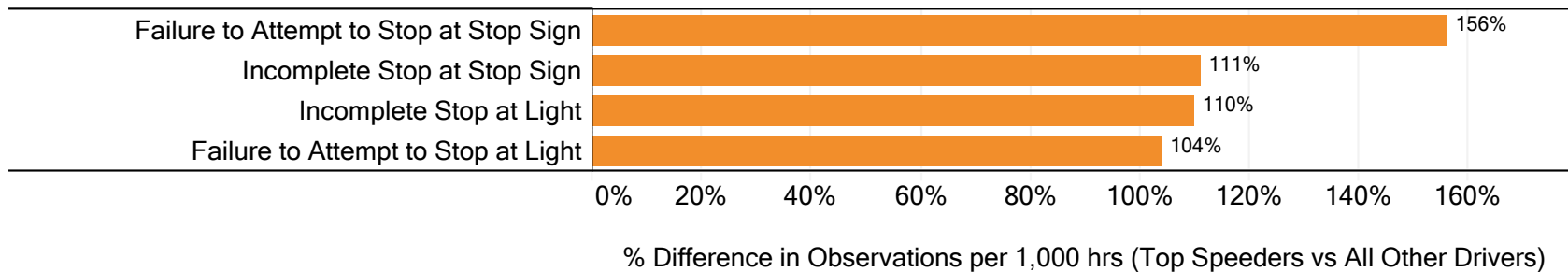
- Top Speeders are nearly **3x more likely** than all other drivers to maintain a following distance of less than one second.

¹ USDOT FMCSA: <https://www.fmcsa.dot.gov/safety/driver-safety/cmV-driving-tips-following-too-closely>

Speeding – Incomplete/Failure to Stop

Drivers who speed the most are consistently more likely to not stop – or come to a complete stop – at stop signs and stop lights. With nearly 26% of all truck collisions occurring at an intersection,¹ there is a high risk of injury or worse.

Failure to Stop at Intersection



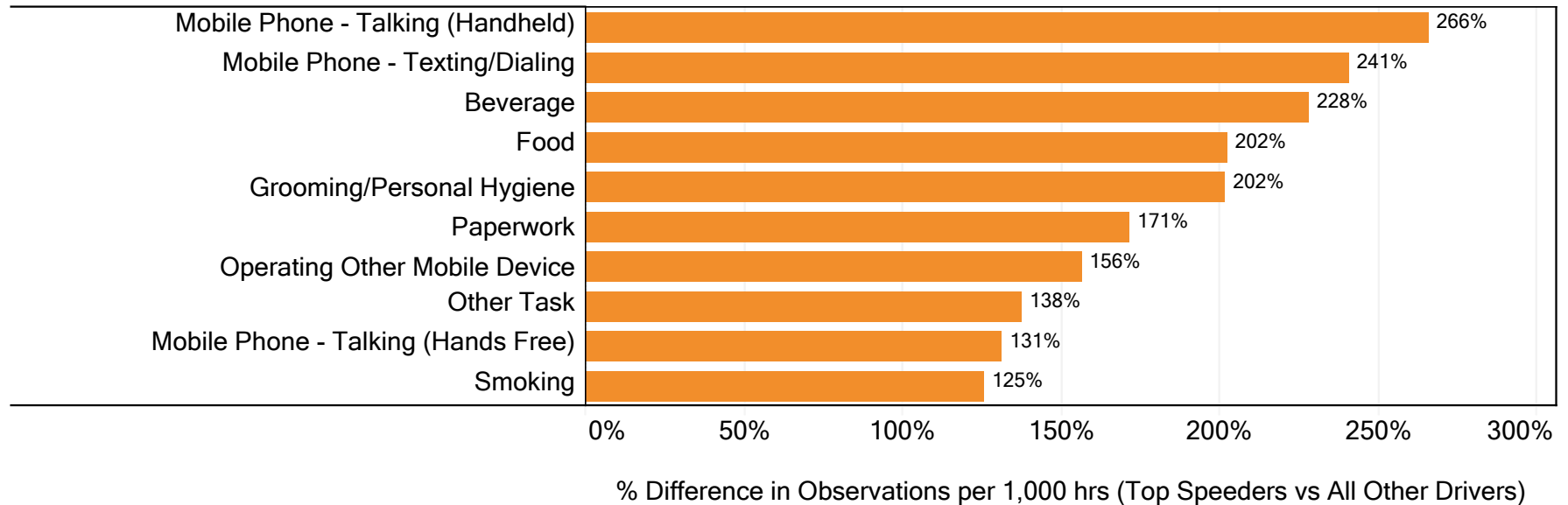
- Top Speeders are **2.5x more likely** to not attempt to stop at a stop sign than all other drivers.
- Top Speeders are also **2x more likely** to not come to a complete stop at either stop lights or stop signs

¹ FMCSA Large Truck & Bus Crash Facts 2015.

Speeding – Distracted Driving

Drivers who speed the most have a significantly higher propensity to be distracted while driving – more than 2.5x all other drivers, averaged across all distractions.

Distractions

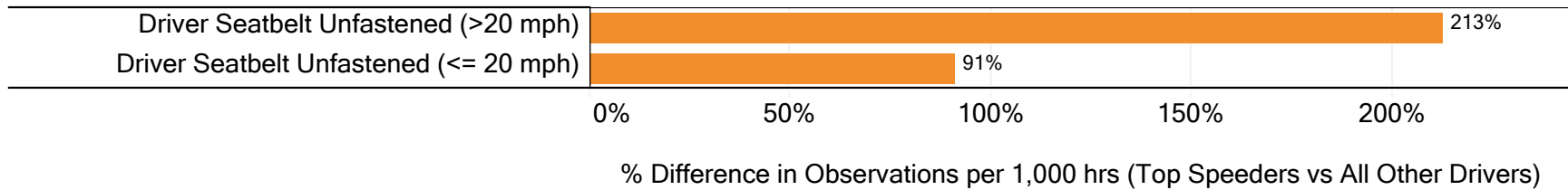


- Mobile phones top the list of Top Speeder distractions at a rate that's **nearly 3.5x** all other drivers.
- Although not top of the list, food, beverage and grooming/personal hygiene occur **3.2x** more in Top Speeders than all other drivers.

Speeding – Seatbelts

Drivers who speed the most also engage in other risky driving behaviors. In fact, they use seatbelts the least. Seatbelts reduce crash-related injuries and deaths by about half.¹

Seatbelts



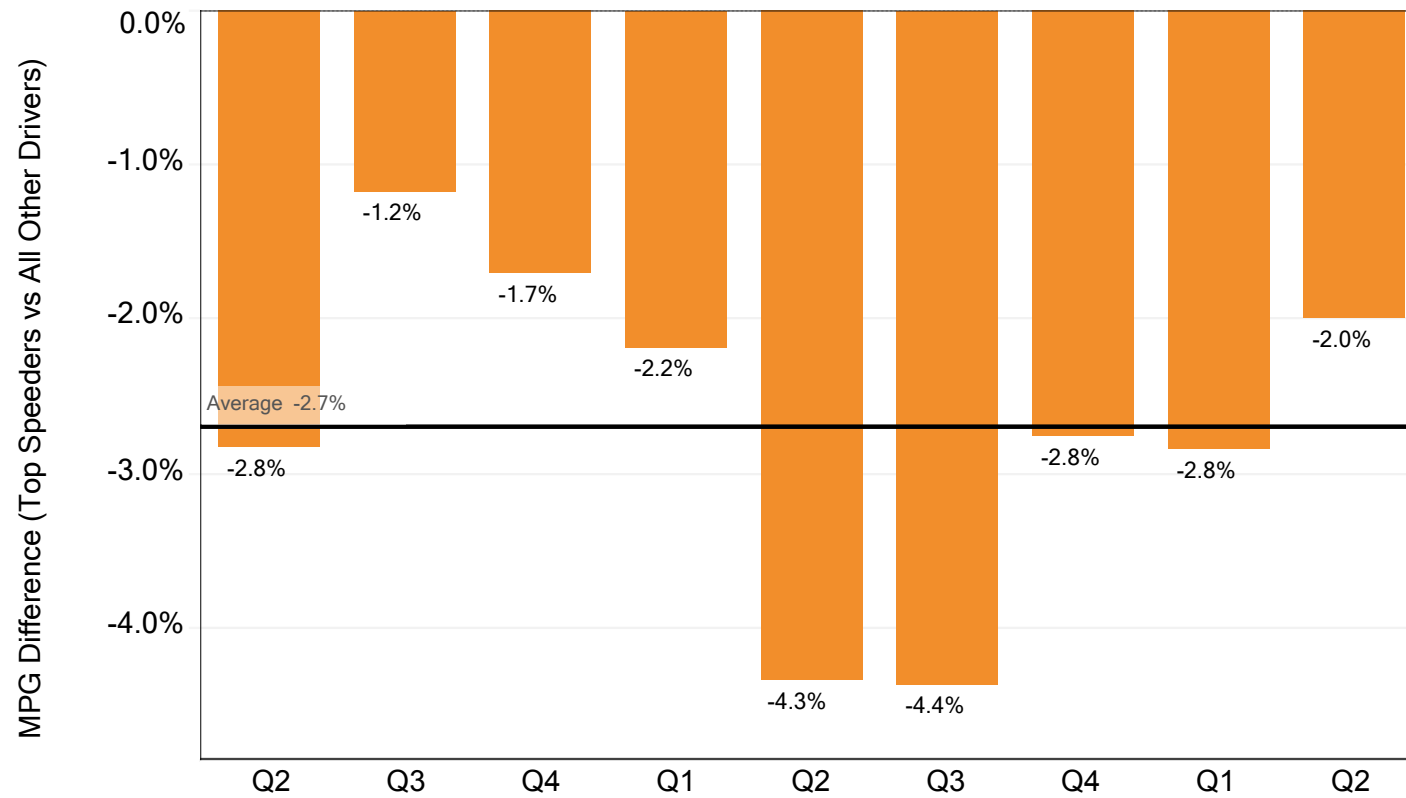
- Top speeders are **3.1x more likely** to not wear their seatbelts at higher speeds and are more likely to be injured in a collision.

¹ Kahane CJ. Fatality reduction by safety belts for front-seat occupants of cars and light trucks: updated and expanded estimates based on 1986-99 FARS data. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration; 2000. Publication no. DOT-HS-809-199. Available at <http://www-nrd.nhtsa.dot.gov/Pubs/809199.PDF>.

Speeding – Fuel Waste

Drivers who speed the most experience lower MPG compared to all other drivers. Speeding impacts more than safety; it also impacts a fleet’s bottom line.

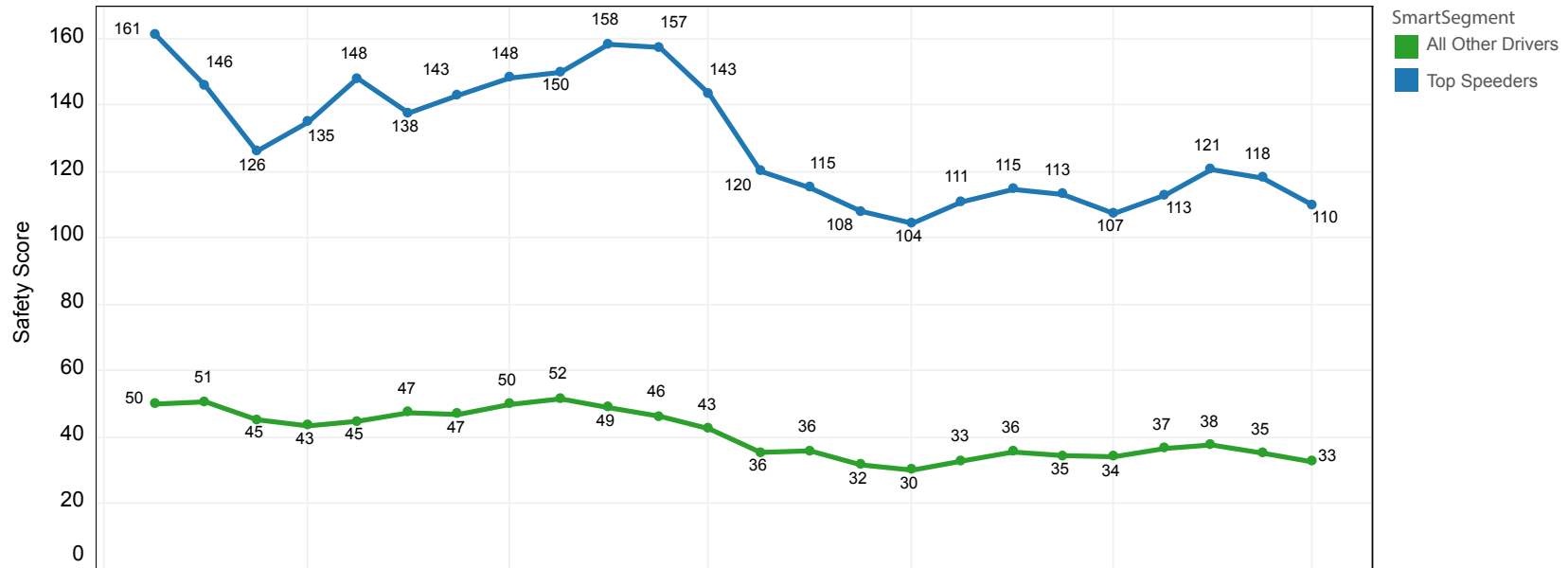
Fuel Economy



- On average, MPG for top Speeding Drivers is **2.7% lower** than for all other drivers. Targeted coaching can deliver significant safety and fuel savings.

Speeding – SmartDrive SmartIQ® Safety Score

In general, drivers who speed the most are at a higher risk of a collision. The SmartIQ Safety Score measures overall risk, as evidenced by other findings in this study. A lower Safety Score drives reductions in collision frequency and severity.



- On average, Top Speeders' SmartDrive Safety Score is 3.1x worse than All Other Drivers.** Safety Score measures the observed rate of risk in a single score. The score incorporates information about each observation's relative risk, the number of occurrences of each observation, the amount of time that was driven and other factors.

Need more reasons to eliminate speeding in your fleet?

As evidenced in this report, and reinforced by the [Network for Traffic Safety \(NETS\)](#), [FMCSA and U.S. Department of Labor Reports](#), the costs of reducing speeding in your fleet far outweigh any reason to allow it. Beyond safety, it's important to consider:

The Cost of Crashes

- In the U.S., traffic crashes cost employers \$47.4 billion in direct crash-related expenses, including medical care, liability, productivity losses and property damage ([NETS](#)).
- Speeding, alone, resulted in \$8.4 billion in crash-related expenses for employers. Distracted driving resulted in \$8.2 billion ([NHTSA](#)).
- Speeding is a top contributing factor to traffic crashes. In 2013, speeding was linked to 29% of all fatal crashes, and 9,613 lives were lost in speeding-related crashes ([NHTSA](#)).

Maintenance Costs

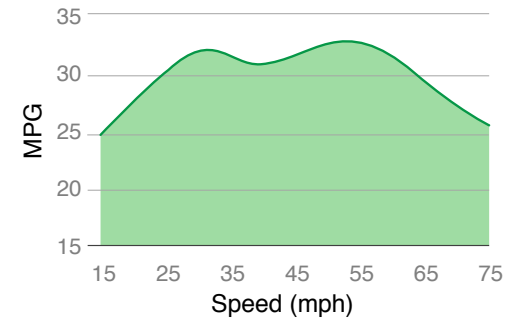
Gears, bearings, clutches, suspension and drive trains all wear much faster at higher speeds. Increasing speed from 50 mph to 60 mph increases maintenance costs by 38%. Increasing the speed to 70 mph increases the cost by 80%.¹

Impact on Tires

Sustained high speeds raise tire temperatures above the critical level causing strength and wear properties to deteriorate rapidly. Tire wear will almost double at road speeds of 70 mph or greater.¹

Fuel Efficiency

Increasing highway cruising speed from 55 mph (90km/h) to 75mph (120km/h) can raise fuel consumption as much as 20%. Drivers can improve their gas mileage 10-15% by driving at 55mph rather than 65 mph (104km/h).



Data based upon EPA and fueleconomy.gov statistics. Note: Many factors affect fuel economy so figures can vary significantly.

¹ NAFA Vehicle Policies and Procedures Survey

Overview of Study and Methodology

This study was conducted by utilizing the SmartDrive® database of over 220 million analyzed driving events and the accompanying telematics data. The study focuses on four different types of speeding observations

- Moderate Speeding (≤ 10mph Over Limit)
- Excessive Speeding (≥ 10 mph Over Limit)
- Exceeded Maximum Fleet Speed
- Attained Extreme Speed (85mph+ or 10mph over Max Fleet Speed)

Only private fleet, for-hire and specialty trucking customers were included in this study.

Top Speeders: Drivers whose speeding rate was in the top 25% of the entire driver population in a given week. Speeding rate is calculated as the ratio between speeding score and miles driven.

$$\text{Speeding Rate} = \frac{\text{Speeding Score}}{\text{Miles Driven}}$$

Speeding score is based on four different types of speeding observations that were measured through video events.

Other Drivers: Drivers whose speeding rate was in the bottom 75% of the entire driver population in a given week.

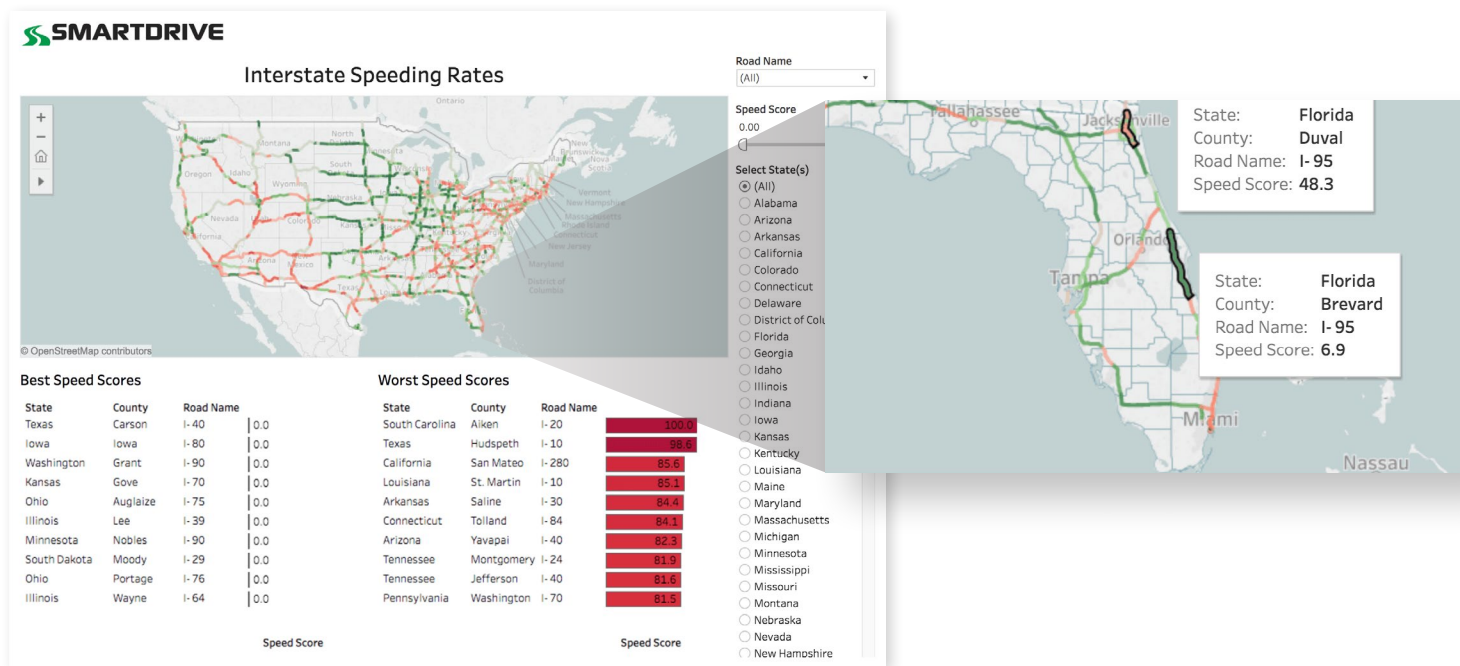
| | Top Speeders | All Others | Grand Total |
|--------------------------------|--------------|---------------|---------------|
| Distance Driven (miles) | 305,273,742 | 1,228,271,925 | 1,533,545,667 |
| Trip Duration (hours) | 9,062,145 | 36,578,237 | 45,640,381 |
| Unique Drivers | 24,503 | 41,760 | 42,261 |

Note: Many drivers appear in both categories at some time during the two-year study period but only count once in the grand total.

See Speeding Dangers...and Avoid Them

The SmartDrive SmartIQ *Speeding Drivers Snapshot for Truckers* illustrates key observations that distinguish speeding drivers from all other drivers. As an added feature, we included [an interactive map](#) that shows where speeding dangers exist on our country's interstates.

Now, in addition to understanding the impact of speeding on your fleet, you can discover where it's occurring and potentially avoid it. See which interstates have the best and worst speed scores. Drill down into specific states to identify where the most speeding occurs. Or, search by road name to learn more about where your drivers drive.



Utilizing SmartDrive's database of over 220 million analyzed driving events and the accompanying telematics data, the map provides speed scores calculated for interstates segmented by state/county, utilizing SmartDrive's speeding observations weighted by severity, normalized by hours driven, and scaled 0-100.