

Do You Know What's Really Going on in Your Fleet?

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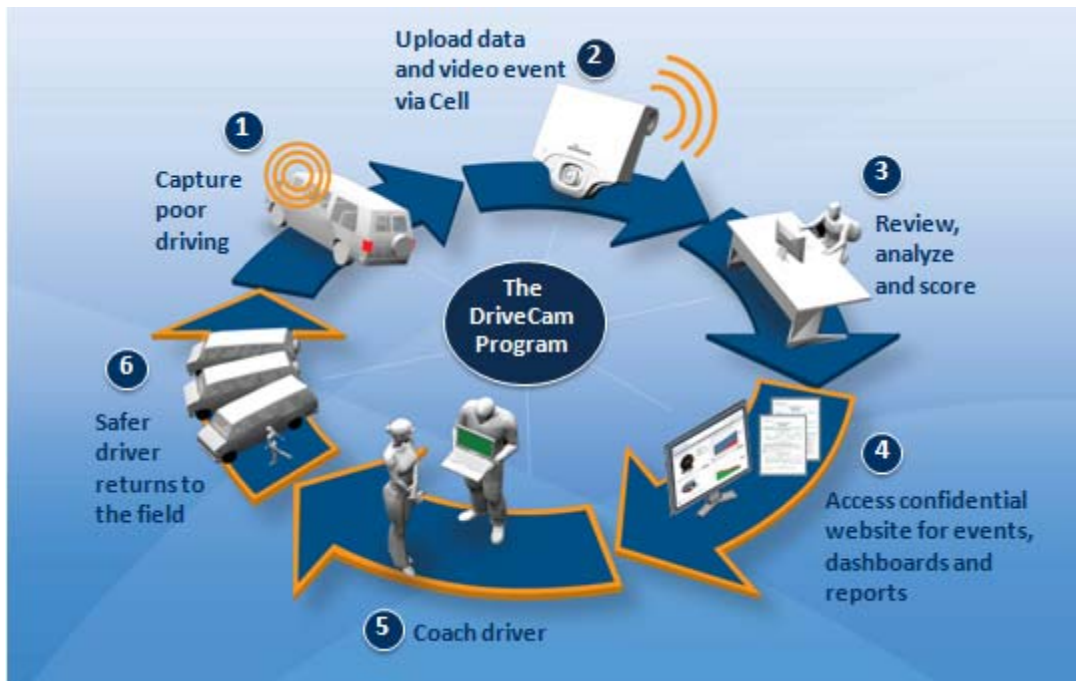
Introduction

I've been working with commercial fleets, helping them to improve driver behavior for almost thirty years. I blame this occupation, not genetics, for my loss of hair. I'm convinced that when I finally walk away from this endeavor, my hair will grow back thicker than ever.

Over the past 30 years I've done ride-alongs with thousands of drivers. Mostly, during my days with Smith System, the driver training company. I've also reviewed video of 1000's of collisions and near collisions collected through DriveCam's in-cab video technology. The combination of these experiences has provided me a unique view of what a good driver is and what a poor driver looks like. It's helped to crystallize, in my mind, what are the more common mistakes drivers make that get them into trouble. And it's helped me to isolate other mistakes that, while less common, can lead to more severe consequences. Some may be what you'd expect, but others may not.

Background

At DriveCam, our clients deploy in-cab video technology as a means to improve driving, as well as to capture the truth if a collision occurs. The video camera is commonly affixed to the windshield and is loop recording in front, as well as inside, the vehicle. When the vehicle experiences substantial force, such as hard braking or swerving, the device is triggered to save the 8 seconds before the moment of force as well as an additional 4 seconds afterward. The net result is a video that reveals what happened and why. This video is then uploaded to our review center, where it is reviewed and assessed for risk. Events with a significant level of concern are then directed to the client for driver coaching via a web platform. The following diagram illustrates the process.



We currently have analyzed approximately 20 million risky driving clips, so we're learning a tremendous amount about driver behavior and what can be done to make drivers safer and more fuel efficient.

The Difference between Ride- Alongs and Video

My ride-alongs have been a mix of one-on-one "observation" drives as well as many group ride-alongs oriented towards training. These ride-alongs mostly flush out the mistakes drivers make that they aren't even aware of. These are the unconscious bad habits that have been repeated for so long the driver doesn't even realize he's doing it. It is critical to flush out these bad habits so drivers can recognize these shortcomings and improve, but ride-alongs won't reveal all you need to know to be assured the driver is safe. Drivers are on their best behavior during ride-alongs. To the best of their ability, most will drive the way they think you want them to drive as opposed to the way they really drive. There are some risky actions that may be a willful, regular component of their driving that are not revealed. It's likely they will revert to these risky actions after the ride-along.

That's where the video capture can be so useful. Drivers choosing to take willful, risky actions such as running a stop sign, speeding or using a cell phone against policy will not be exposed during a ride-along, but most are ultimately revealed through the video.

This mix of ride-alongs and video review has provided me with unique insight into drivers' common poor driving habits, as well as their most frequent willful risky actions.

Most Common Risky Behaviors

Each year statistics are published listing the most common risky behaviors. This information often becomes a directional focal point for fleet safety efforts by fleet operators, as well as other organizations with a stake in reducing traffic collisions. Most of this data is drawn from accident reports, witness statements, and law enforcement analysis. Unfortunately, these viewpoints are often incomplete and commonly skewed due to the limitations of the particular perspective that was provided.

Currently, these are some of the more commonly cited risky driving behaviors that cause traffic collisions and are a focus of improvement efforts by fleet operators:

- Distracted driving
- Speeding or traveling too fast for conditions
- Fatigue or falling asleep
- Violating traffic laws
- Aggressive driving

Our Analysis Reveals Some Differences...

At DriveCam, as we analyze the risky driving events captured in-cab, we are not finding our list of most common risky behaviors necessarily align with common beliefs.

Currently, distracted driving – specifically, cell phone use and texting – has become a focal point for many driving-safety-focused organizations. It's risen to the point where it's gone political. Over the past year, President Obama has spoken out on the hazards of distracted driving and banned use of cell phones while driving for federal employees. Safety organizations have made it a center-piece of their driver safety initiatives. The Department of Transportation has implemented stiff penalties for commercial motor vehicles cited for use of a hand-held device while driving. And business fleets have followed suit by modifying policies to limit or prohibit cell phone use while behind the wheel.

Don't get me wrong. I'm not opposed to these initiatives. There is no doubt that while engaged in texting or dialing, drivers are "driving blind". They have no clue about their surroundings and are an extreme hazard. It's just that we are not finding that "distracted driving" is as big an element of unsafe driving as some may suspect. Our data suggests that even if drivers do put down their cell phones, it won't have the impact on reducing collisions, fatalities and injuries that some anticipate. In a 2009 study of our data, we found that drivers who had one or more risky events involving a hand-held cell phone did correlate to a higher crash rate. Drivers who had 4 of these incidents identified were 3 times more likely to have been in a crash than drivers who did not have any. However, risky driving events involving a hand-held cell phone represented less than 5% of the risky driving behaviors we identified. We find there are other risky behaviors that are more prevalent in causing traffic accidents. It may be that with all the attention on distracted driving, these other concerns are getting overlooked.

Note: It reminds me of the national campaigns against “road rage” in the mid 1980’s. As an accident cause it was over blown and, ultimately, these campaigns against “road rage” had limited impact on improving safety on the road.

The Most Common Risky Driving Behaviors

We’re finding that the most common risky behaviors are not products of new technologies. They are largely the fundamental skills we were all supposed to have learned when we first started driving. They don’t show up in police reports because drivers don’t realize these were the cause or they don’t want to admit it.

Not Looking Far Ahead. This driver shortcoming was present in 28% of the risky driving events we reviewed. We mark an incident as Not Looking Far Ahead when the driver responds late to a problem that was readily visible much earlier. This late response can lead to several undesirable results:

- Rear-ending the vehicle ahead
- Getting rear-ended by the vehicle behind
- Load shift or damaged goods for truckers
- Passenger falls and subsequent claims in motor coach and transit operations
- Increased wear and tear on the vehicle

While Not Looking Far Ahead is a frequent, risky behavior, we also find drivers who repeatedly exhibit this shortcoming are more likely to have 1 or more collisions versus drivers not identified with this issue. In a recent 26-week study, we found that drivers who had been identified with 5 or more Not Looking Far Ahead incidents were 3 times more likely to have experienced a collision than drivers who had not had any of these incidents.

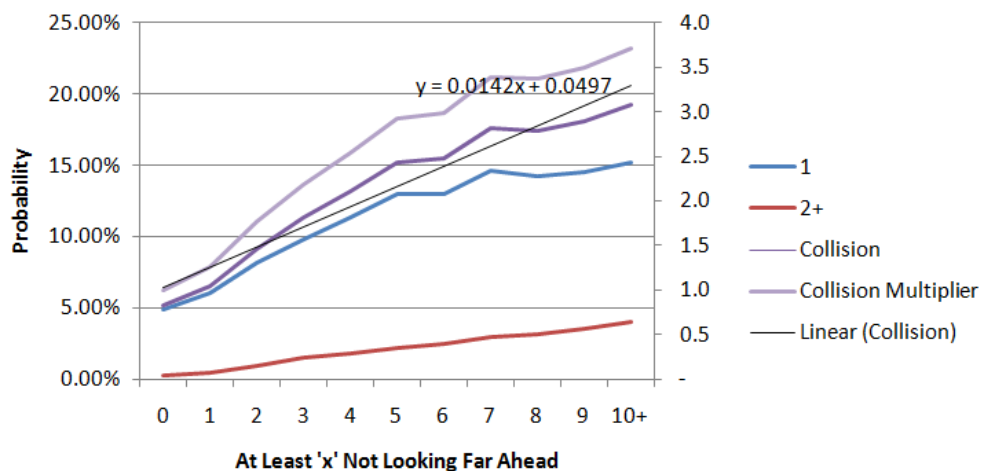


Exhibit 1. Drivers who had been identified with 5 or more Not Looking Far Ahead incidents were 3 times more likely to have experienced a collision than drivers who had not had any of these incidents.

We found other “fundamental” violations of safe driving practices to be significant contributors to collision potential. Space was a clear theme as “Failed to Keep an Out” and “Following Too Close” at less than 2 seconds posed meaningful risks.

“Failed to Keep an Out”. We define “Failed to Keep an Out” as instances where a driver unnecessarily cuts it close to other vehicles, pedestrians or objects. This wasn’t observed in as many risky events (5%), but our research found that drivers who had events with this selection were significantly correlated to increased collision potential. For example, a driver who had 5 of these events during the 26-week period was 5 times more likely to have had a collision than was a driver without an event where “Failed to Keep an Out” was identified.

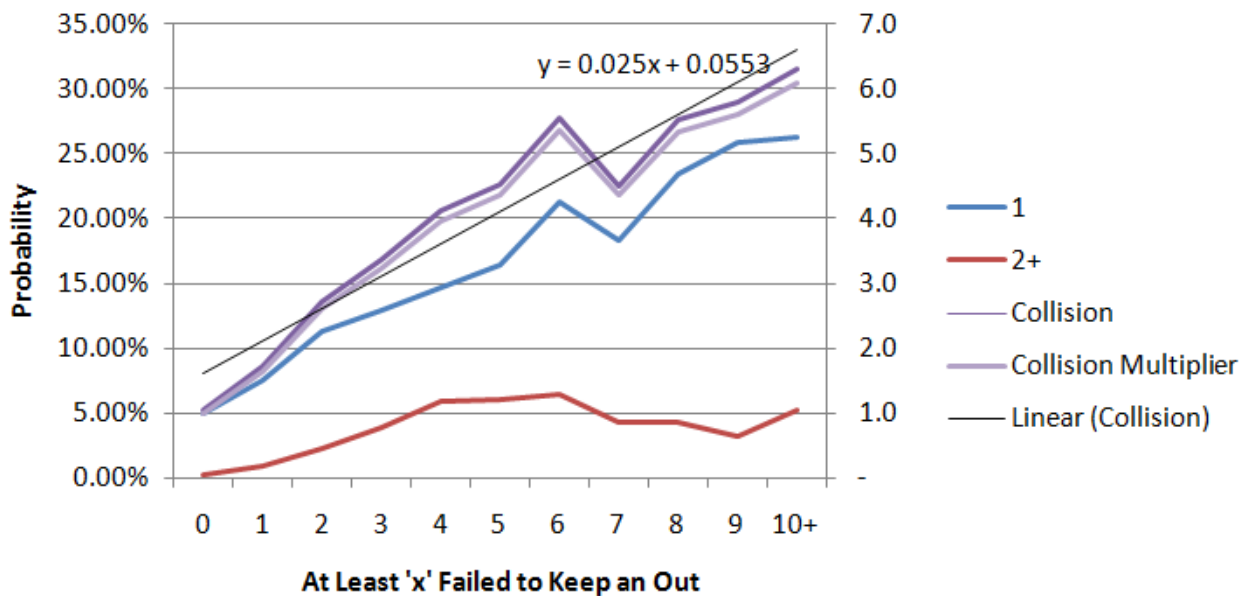


Exhibit 2. A driver who had 5 of these events during the 26-week period was 5 times more likely to have had a collision than was a driver without an event where “Failed to Keep an Out” was identified.

Following Too Close. In our review of events, we place issues of Following Too Close into buckets broken out by intervals of seconds. Our studies show that following distances of less than 2 seconds are where most of the risk lies. This was present in 27% of the risky events we looked at. Looking even closer, in instances where the driver was maintaining a following distance of 1 second or less, we found that a driver with 6 or more of these instances identified was 4 times more likely to have experienced a crash during the study period than a driver with none of these events.

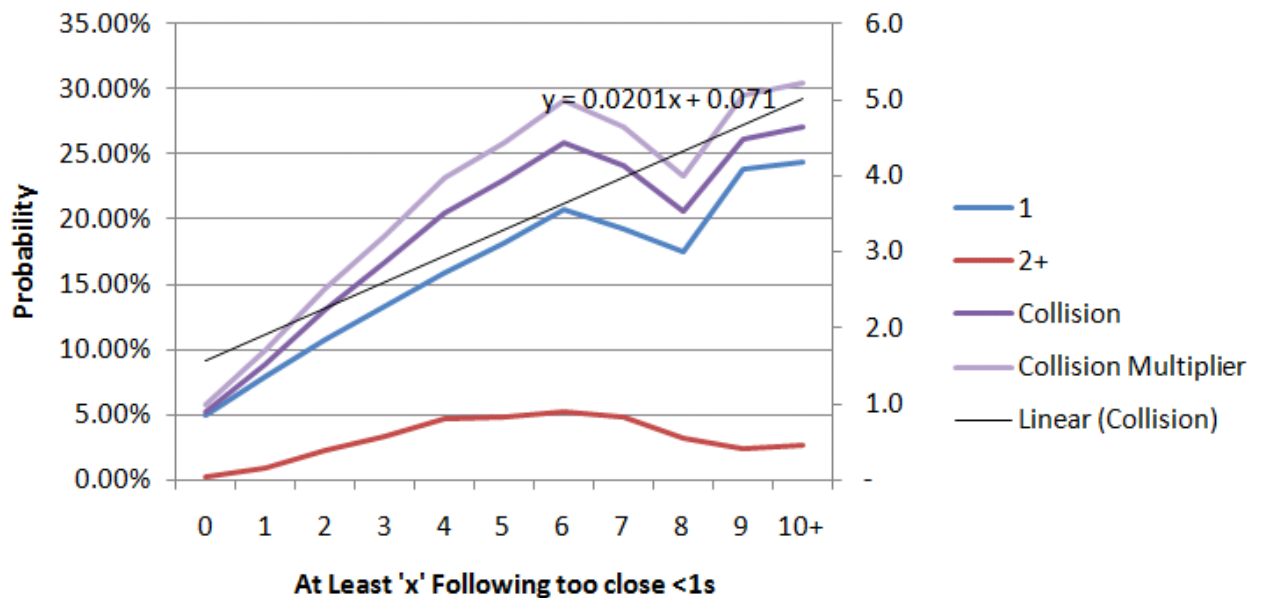


Exhibit 3. A driver with 6 or more of instances of a following distance of 1 second or less was 4 times more likely to have experienced a crash during the study period than a driver with none of these events.

Summary

Driver safety efforts tend to go through periods where one issue reaches a critical mass in awareness and goes viral. This is a good thing in that it draws many different stakeholders into the issue and causes changes to happen more quickly than they may otherwise have. But, it can also lull fleet operators into thinking they've solved the problem. Some may overlook other crucial safety issues and will later be disappointed when the results they were expecting don't follow.

Until the day when technology takes driving decisions out of the hands of the operator, a key focus of driving safety efforts needs to be on insuring drivers are using the fundamental safe driving skills that have separated the "good driver" from the "bad driver" since the invention of the automobile. Vehicles and technology have changed dramatically over the years, but the underlying causes for people making mistakes behind the wheel have not.