sambasafety

2024

DRIVER RISK REPORT:

Key Trends Shaping Automotive Mobility

FOREWORD

May 2024

At SambaSafety, we believe in the power of data-driven insights to influence positive change. This report marks an important advancement in our company's mission to enhance driver safety and performance, emphasizing the need for collaboration among insurers, employers and government bodies. We hope to elevate dialogue and inspire partnership within the risk and safety ecosystem.

Let me share some insights that underscore the urgency and importance of this report. First, the dynamics of automotive risk are not static nor uniformly distributed – they are as varied as the individuals and vehicles on the road. This variability necessitates a sophisticated, data-driven approach to managing risk. Our expansive data sets provide the foundation needed for real-time visibility into driver behavior.

Second, the granularity of data we now have at our disposal offers an increased level of insight and objectivity essential for addressing labor shortages, managing the surge in insurance premiums and reversing detrimental post-COVID driving behaviors. Transportation incidents were the leading cause of workplace deaths in 2022,[1] with their toll reaching far beyond the immediate tragedies. These incidents devastate communities and profoundly impact businesses – from reputational damage to crushing nuclear verdicts. Our commitment to leveraging data for safer roadways becomes not just a strategic imperative but a moral one.

We hope our *2024 Driver Risk Report* will inspire you to implement proactive measures that significantly improve driver safety and systemic mobility risk across your organization. This report is also a testament to our resolve to help lead this charge. Together, we can forge a path toward safer communities.

Thank you for your commitment to driving change.

Matt Scheuing
CEO, SambaSafety

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RESEARCH METHODOLOGY & DATA SOURCES

SambaSafety's *2024 Driver Risk Report: Key Trends Shaping Automotive Mobility* was created in response to a demand from the market and our customers for data-driven insights into roadway risk. The research utilized multiple quantitative data collected from SambaSafety's repository of motor vehicle records (MVR), court records, telematics and Compliance, Safety, Accountability (CSA) data to offer a view of trends driving automotive mobility risk. We also explore how effective driver monitoring and training programs can catalyze significant transformation in the behaviors influencing this shift.

VIOLATION ANALYSIS

The violation analysis was conducted from over 40 million MVRs utilized for employment and insurance purposes during the calendar years of 2020 through 2023. Over 11.7 million unique licenses had at least one violation recorded during that time. SambaSafety standardizes violation codes between states and classifies them into major and minor groups, as defined in Appendix A. State and regional heatmap metrics are calculated using unique licenses by state and normalized per 100 licenses to account for varying population sizes.

FMCSA ANALYSIS

The Federal Motor Carrier Safety Association (FMCSA) analysis leveraged SambaSafety CSA data from over 1,000 monitored commercial motor vehicle (CMV) accounts during the calendar years of 2022 through 2023. SambaSafety categorizes codes as defined in Appendix B.

EFFICACY STUDY

SambaSafety's monitoring and training efficacy study was conducted from a cohort of over four million monitored drivers. Results were produced by comparing the average violation count in the 48 months prior to monitoring or training enrollment respectively, to the average monthly count of violations 12 and 24 months after the relevant enrollment.

Violations Before and After Monitoring Start
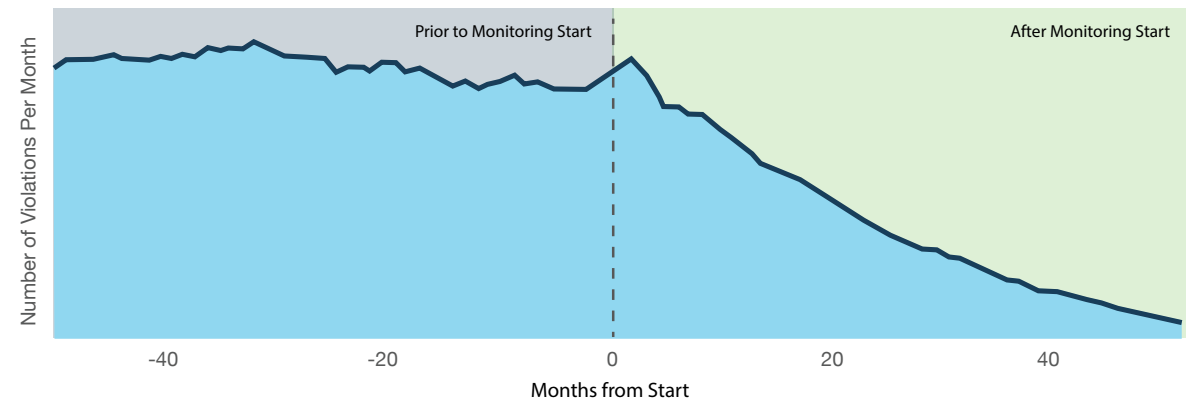
INDUSTRY DYNAMICS FORCING CHANGE

Insurance Cost Pressures

Auto insurance has emerged as the primary contributor to inflation, with distracted driving and an uptick in speeding exacerbating the trend. The landscape is further complicated by a shift in the delivery of goods and services over the last few years. We explore trends impacting mixed fleets and the gig economy, highlighting a higher proportion of fatalities attributed to light trucks and speed-related violations. Insurers and policyholders must embrace a collaborative approach, prioritizing proactive risk management across different segments and industries. In response, many insurers and brokers are enhancing risk control services this year, and our survey highlights the key areas they are focusing on.

Hiring & Retention Trends

In 2024, countless organizations face budget constraints and labor shortages, driving an increased focus on retaining employees and upskilling younger generations to fill knowledge gaps. This shift necessitates a deep understanding of the distinct needs of these demographic groups, particularly as driving risks and behaviors change with age. SambaSafety's license violation analysis uncovered unique insights into how driving risks and behaviors evolve as drivers mature. We also explore the risk trends of novice drivers in states like South Carolina, where younger generations have the highest violation rates. These insights enable businesses to make informed decisions about the training needed to support younger generations well into the future.
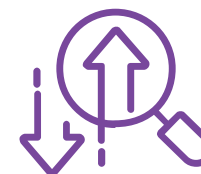
Regulatory Compliance Updates

The current regulatory environment is evolving, making it challenging for organizations to navigate. Nuclear verdicts and social inflation pressure commercial carriers and private fleets, driving potential legal reforms to protect businesses and insurers. Our report highlights FMCSA violation trends for commercially regulated fleets and offers insights into license-related risks, including the impact of suspensions on both personal and commercial driver's licenses (CDLs). Staying informed and adaptable is crucial for maintaining safety and compliance in this dynamic environment.

INSURANCE DATA INSIGHTS

Claims severity is on the rise due to an increase in distracted driving and vehicle costs. In turn, souring insurance premiums are now the top cause of inflation, forcing consumers to shop more frequently. Instead of raising prices and creating a barrier to obtaining insurance, this should be treated as a catalyst for increased collaboration between insurers and their clients. Access to better driving data can shift insurers from simply raising premiums to proactively managing the risk in their business.

KEY TRENDS DRIVING INFLATION

The current auto insurance market poses significant financial challenges for insurers, business owners and consumers alike.

Obtaining insurance has become more complex, with per-mile premium costs for commercial motor carriers surging nearly 50% over the past decade[2] and the auto insurance shopping rate increasing by 49% in Q1 of 2024.[3] The industry is currently the most significant driver of inflation, sitting at 22%.[4] Many factors contribute to this:

Claims Severity: The number of auto insurance claims has risen 14% since 2020, with claims severity jumping 36%.[5]

Nuclear Verdicts: Nuclear verdicts surpassing $10 million have increased, due in part to greater access to funded litigation for plaintiff firms. The total sum of these verdicts reached a staggering $18.3 billion in 2022.[6] This pressure has reignited congressional interest in increasing interstate motor carriers' minimum liability insurance requirements from $750,000 to as much as $5 million, which would significantly impact per-mile premiums.[7]

Vehicle Costs: New and used vehicle prices are historically high, inflating repair costs. Safety sensors and connected vehicle technology have also led to more complex repairs and an increased demand for replacement parts, driving up repair times and costs.

Driving Behavior: Distracted driving has increased considerably in recent years, especially for those who spend more time behind the wheel. This has forced insurers and businesses to leverage behavioral driving insights to identify and reduce this risk.

With access to more predictive data sources and vigorous risk mitigation efforts, insurers and fleets can work together to reverse these trends – paving the way for a more sustainable and equitable insurance landscape.

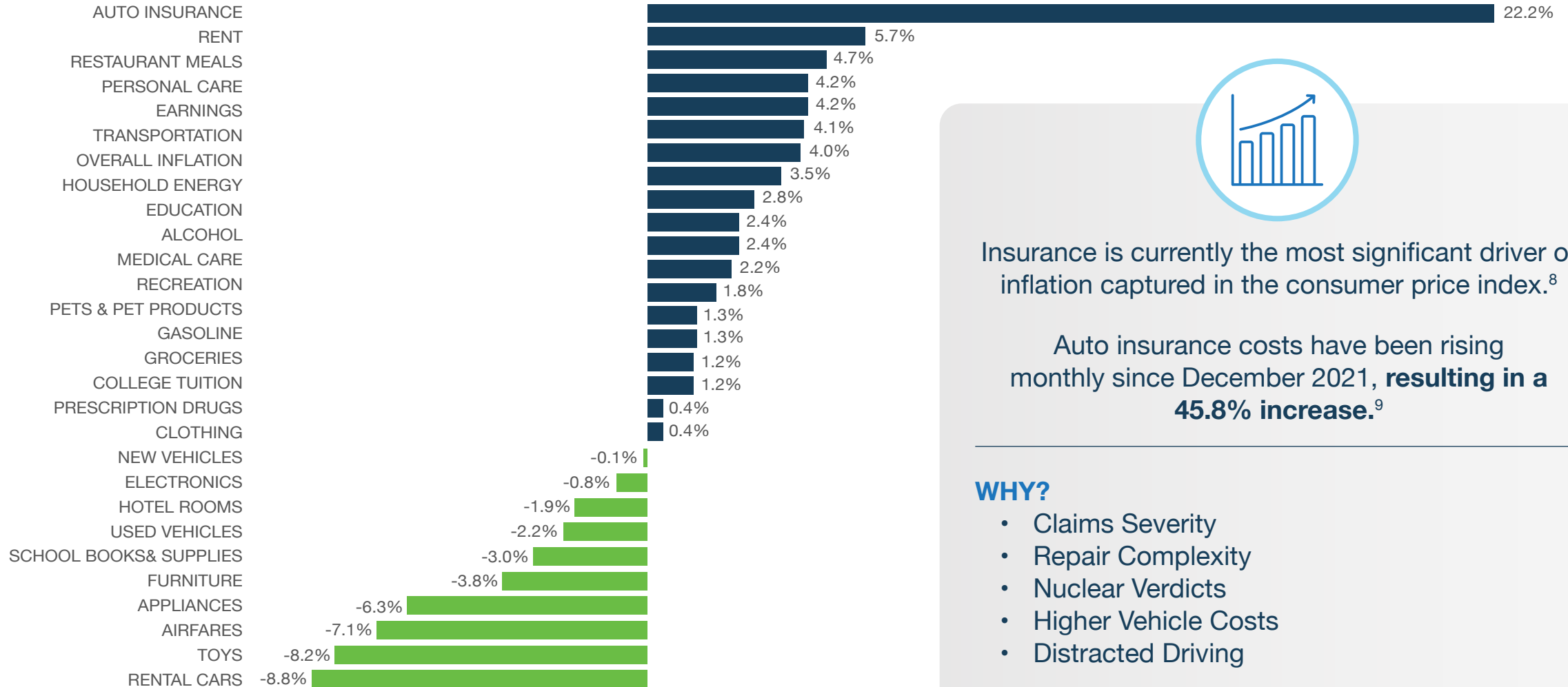**John Barbagallo**
Strategic Advisor, SambaSafety
Former Commercial Lines President, Progressive

"The convergence of these factors has created one of the most challenging markets for insurers and commercial fleets that we've seen in decades. Insurers that adopt both a data-driven approach to risk control and offer tailored training to clients will fare much better than their competitors."

AUTO INSURANCE IS THE #1 DRIVER OF INFLATION

Category	Value
AUTO INSURANCE	22.2%
RENT	5.7%
RESTAURANT MEALS	4.7%
PERSONAL CARE	4.2%
EARNINGS	4.2%
TRANSPORTATION	4.1%
OVERALL INFLATION	4.0%
HOUSEHOLD ENERGY	3.5%
EDUCATION	2.8%
ALCOHOL	2.4%
MEDICAL CARE	2.4%
RECREATION	2.2%
PETS & PET PRODUCTS	1.8%
GASOLINE	1.3%
GROCERIES	1.3%
COLLEGE TUITION	1.2%
PRESCRIPTION DRUGS	1.2%
CLOTHING	0.4%
NEW VEHICLES	0.4%
ELECTRONICS	-0.1%
HOTEL ROOMS	-0.8%
USED VEHICLES	-1.9%
SCHOOL BOOKS& SUPPLIES	-2.2%
FURNITURE	-3.0%
APPLIANCES	-3.8%
AIRFARES	-6.3%
TOYS	-7.1%
RENTAL CARS	-8.2%
	-8.8%

Source: Bureau of Labor Statistics March 2024

Insurance is currently the most significant driver of inflation captured in the consumer price index.[8]

Auto insurance costs have been rising monthly since December 2021, **resulting in a 45.8% increase.**[9]

WHY?
- Claims Severity
- Repair Complexity
- Nuclear Verdicts
- Higher Vehicle Costs
- Distracted Driving

DISTRACTED DRIVING

71% OF BROKERS CITE DISTRACTED DRIVING AS THE MOST SIGNIFICANT THREAT TO COMMERCIAL AUTO PROFITABILITY[10]

Distracted Driving Impact: **$395 billion**/per year[11]
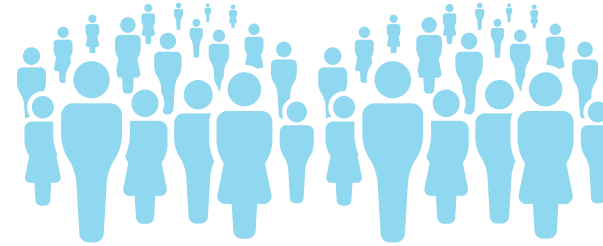
3,308 people lost their lives to distracted driving in 2022[12]

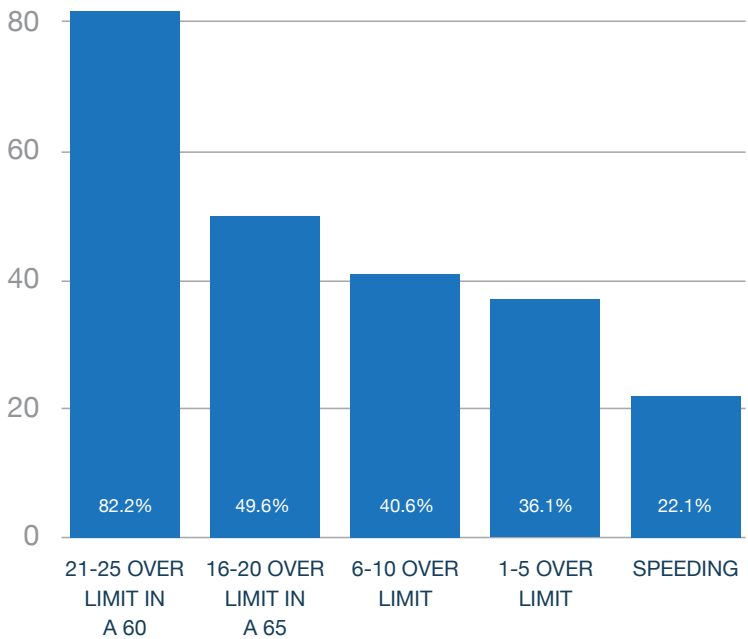|			
#1	**8%**	**84%**	**31%**
Automotive accidents are the leading cause of workplace injury and death, accounting for 22% of all workplace fatalities.[13]	of fatal crashes in 2022 involved a distracted driver.[14]	of 30-44-year-olds said they used an app while driving in the past month.[15]	of employees admit their distracted driving caused a work-related crash, up from 26% in 2022.[16]

SPEEDING IS HIGHLY PREDICTIVE OF FUTURE CRASHES

Speeding is a leading indicator of future crashes, increasing the probability of a claim in 12 months by 20% to 80%, depending on the driver's speed relative to the posted limit.
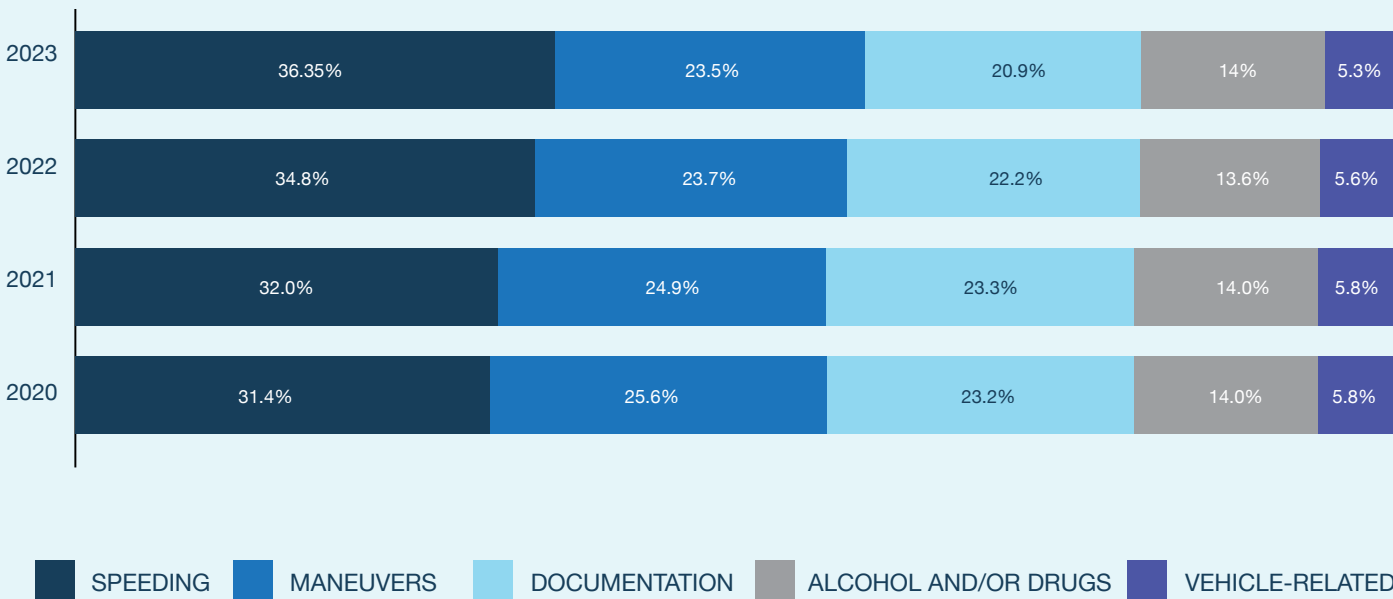
Speed-related violations make up the largest proportion of all violation categories and have increased year over year since 2020. Nearly one-third of traffic fatalities are speed-related, underscoring the severity of this issue.[17]

Future Claim Probability By Speeding Violations

Violation Category Distribution By Year

	SPEEDING	MANEUVERS	DOCUMENTATION	ALCOHOL AND/OR DRUGS	VEHICLE-RELATED
2023	36.35%	23.5%	20.9%	14%	5.3%
2022	34.8%	23.7%	22.2%	13.6%	5.6%
2021	32.0%	24.9%	23.3%	14.0%	5.8%
2020	31.4%	25.6%	23.2%	14.0%	5.8%

Future Claim Probability By Speeding Violations chart values:
- 21-25 OVER LIMIT IN A 60: 82.2%
- 16-20 OVER LIMIT IN A 65: 49.6%
- 6-10 OVER LIMIT: 40.6%
- 1-5 OVER LIMIT: 36.1%
- SPEEDING: 22.1%

Source: SambaSafety Crash Prediction Study

Source: SambaSafety Violation Analysis CY2023 based on preliminary violation data

LIGHT TRUCKS INVOLVED IN 4X MORE FATAL CRASHES THAN LARGE TRUCKS[18]

SPEED A FACTOR IN 15% OF LIGHT TRUCK FATALITIES

Among all drivers involved in fatal crashes in 2021, 15% of light truck drivers were speeding, compared to 7% of large truck drivers and 22% of passenger car drivers.[19]

The light truck and private passenger groups made up the highest proportion of fatalities as well. The National Highway Traffic Safety Administration (NHTSA) revealed 86% of vehicles involved in motor vehicle crashes in 2021 were passenger cars or light trucks.[18]

Light to medium-duty vehicles do not require a commercial driver's license (CDL) and therefore, are not subject to the same regulations as those represented in the large truck category.

It is crucial that fleets include all employees in their driver risk management program, regardless of license classification or vehicle assignment. This information also underscores the importance of designing driver training programs that cater to the specific scenarios associated with each vehicle type.

GROWING GIG ECONOMY SHIFTS DRIVING EXPOSURE

Passenger cars, including sedans and cross-over vehicles, accounted for over one-third of vehicles involved in fatal crashes.[18] While this analysis is not specific to commercial auto insurance claims, there has been a shift in private passenger vehicles being used for business purposes over the last few years. Gig workers increased 170% between 2019 and 2021,[20] and represent 36% of the U.S. workforce as of 2022.[21] The shift in how goods and services are delivered has created a new and increasing exposure.

There is an opportunity to continue to reduce commercial roadway risk with regular driver education and coaching, particularly with non-CDL drivers.

Fatalities by Vehicle Type, by Vehicles Involved and Percentage of Speeding Drivers
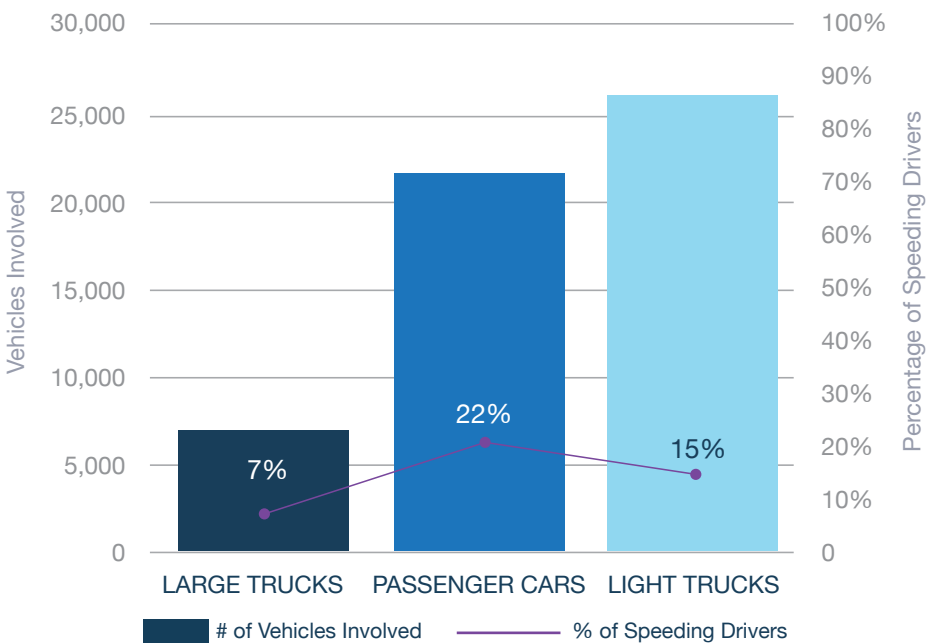
Large Trucks	%	Passenger Cars	%	Light Trucks	%
Truck Tractor	60.1	Sedan	79.2	Utility	53.3
Single-Unit Truck	24.7	Coupe	8.6	Light Pick Up	38.2
Large Pick Up	12.9	Hatchback	8.5	Minivan	4.7
Cargo, Step or Other Van	1.5	Convertible	2.2	Cargo, Step or Other Van	3.8
Other Large Truck	.8	Wagon	1.5		

Sources: Vehicles Involved: NHTSA 2021 Crash Stats,[18] Based on analysis of 10,843,740 total crashes. Speeding Drivers: FARS 2021 ARF/NHTSA 2021 Data: Speeding[19]

TRACKING RISK EXPOSURE TO IMPROVE OUTCOMES

Commercial Auto Insurance has been unprofitable for over a decade, and insurers are now in an environment where customer fatigue and affordability challenges prevent them from achieving profitability through traditional rate increases. This is causing insurers to interrogate their risk management strategies alongside operational and claims expenses as a means of improving resilience and creating a path back to profitability.

A multifaceted approach is necessary to achieve results. *SambaSafety's Efficacy Study* identified monitored drivers have 32% fewer violations on average after the first year, while monitoring and training together resulted in a 77% reduction for the same time period.

Continuous monitoring of telematics and violation data can identify patterns and early risk indicators for loss control teams to stay ahead of an impending claim. These insights are invaluable for fleet owners and insurance carriers seeking to better understand and control runaway claims – especially for those driven by social inflation issues and claims most exposed to inflation.

REGIONAL INSURER REDUCED VIOLATIONS BY 50% IN SIX MONTHS

Facing a surge in first-party claims, a regional commercial insurer partnered with SambaSafety to improve visibility into activity between renewal periods.

They incorporated SambaSafety's risk management solutions into their risk control services, gaining real-time insight into portfolio-wide risk and individual driver behavior. This allowed for targeted mitigation in high-risk areas and a 50% reduction in violations across their Commercial Auto book. As a result, their monitored clients benefitted from smoother renewals and access to more competitive rates.

DATA-DRIVEN RISK CONTROL

Collaboration among insurers, brokers and fleets is necessary for the industry to progress from premium increases to risk reduction. Roughly 55% of insurers plan to increase their risk control services this year. Insurers that focus on data-driven risk control measures will come out ahead.

SambaSafety surveyed members of The National Alliance for Insurance Education and Research[22] to identify what risk control services are being prioritized and which groups fall short.
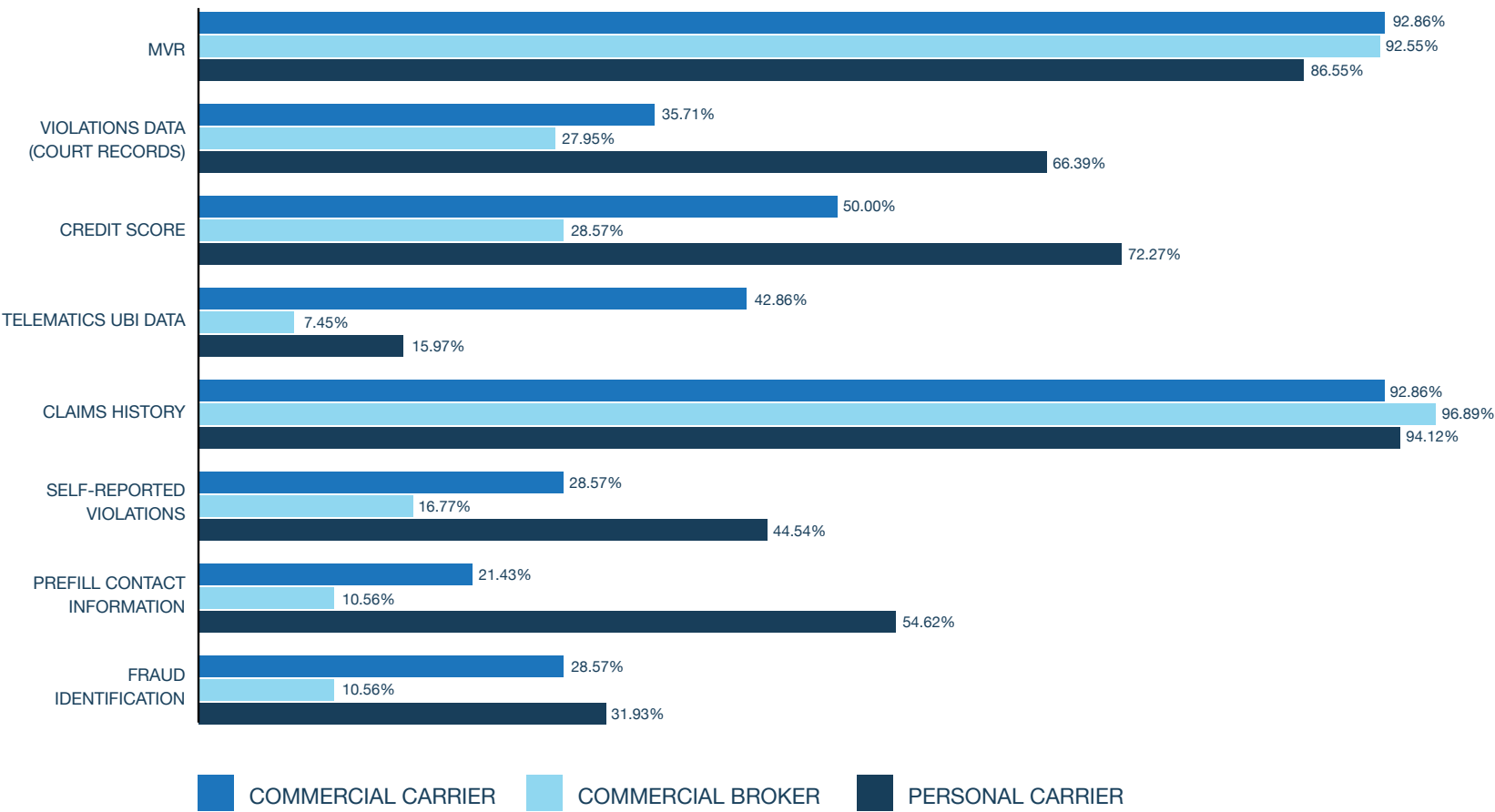
	Carriers	Brokers
Offer MVR Monitoring	36%	50%
On-Demand Driver Training	55%	33%
Telematics Partnership	73%	15%
Regularly Share Insights to Mitigate Risk	64%	68%

NEW DATA SOURCES INCREASE UNDERWRITING PRECISION

INCREASING UTILIZATION OF NON-TRADITIONAL SOURCES

Time-tested risk signals from MVRs and historical claims sources are still top of mind for underwriters in both personal and commercial lines. Insurers and brokers have a wider range of data sources available now than they had even ten years ago. The 2023 survey[23] of National Alliance members identified an increase in the utilization of less traditional sources like telematics and alternative violation data (court records). Insurers are finding new attributes that enhance the predictive capabilities of underwriting models.

Data Sources Used To Assess Risk on New & Renewal Business

Data Source	Commercial Carrier	Commercial Broker	Personal Carrier
MVR	92.86%	92.55%	86.55%
VIOLATIONS DATA (COURT RECORDS)	35.71%	27.95%	66.39%
CREDIT SCORE	50.00%	28.57%	72.27%
TELEMATICS UBI DATA	42.86%	7.45%	15.97%
CLAIMS HISTORY	92.86%	96.89%	94.12%
SELF-REPORTED VIOLATIONS	28.57%	16.77%	44.54%
PREFILL CONTACT INFORMATION	21.43%	10.56%	54.62%
FRAUD IDENTIFICATION	28.57%	10.56%	31.93%

■ COMMERCIAL CARRIER ■ COMMERCIAL BROKER ■ PERSONAL CARRIER

Source: SambaSafety 2023 Report

COMPLETE AND ACTIONABLE DATA SETS

SambaSafety leverages a highly complementary array of data sources to provide a comprehensive risk profile. The following matrix illustrates how the unique sources compare across the five characteristics of big data. While no single source is definitive on its own, the integration of these diverse datasets significantly enhances the predictability and understanding of the total picture of driver risk. Integrating with other relevant data sources, such as claims, can achieve even greater visibility into how behaviors correlate to future crashes.

	Telematics	Dashcam	Court	MVR	CSA
Volume: the size and amount of big data	High	High	Medium	Medium	Low
Variety: the diversity and range of different data types, including unstructured data, semi-structured data and raw data	High	High	Medium	Medium	Low
Velocity: the speed at which the data is generated and delivered - e.g., the specific number of activities generated within a day, hour or trip	High	High	Low	Low	Low
Veracity: the "truth" or accuracy of data and information assets	Low	Medium	Medium	High	High
Variability: the changing nature of the data available to capture, manage and analyze – e.g., in sentiment or text analytics, changes in the meaning of key words or phrases	High	High	Medium	Medium	Low
Value: the insight discovery and pattern recognition that leads to more effective operations, stronger customer relationships and other clear and quantifiable business benefits	High	High	High	High	High

HIRING AND RETENTION DATA INSIGHTS

EMPLOYEE RETENTION TAKES A FRONT SEAT

With budget constraints and labor shortages troubling employers in 2024, organizations are placing a greater emphasis on employee retention and upskilling younger generations to replace knowledge lost in the nearly four million baby boomers retiring each year. This requires insight into the unique needs of these groups. Driving risks and behaviors evolve as drivers mature. Insights into these patterns allow businesses to make more informed decisions about the training needs to support the younger generations well into the future.

EMPLOYMENT TRENDS

Businesses are up against persistent labor shortages, disruption and historically low unemployment rates. Several key trends are driving workforce change:

Labor Shortages Continue

Labor shortage was a major concern for organizations in 2023, with 65% of human resource (HR) professionals reporting it as a top three challenge.[24] The unemployment rate remains at historic lows, holding under 4% for the 27th straight month at the start of May - with little signs of change for the foreseeable future.[25]

2024 Is the Year of Retention

A lack of qualified candidates topped the list of talent acquisition challenges for HR professionals in 2023.[24] Budget and headcount constraints are compounding the labor shortage problem, driving many organizations to direct their efforts toward developing and retaining their current workforce over attracting new talent. This was reflected in industry trends reports, including the American Transportation Research Institute's (ATRI) 2023 Top Industry Issues, where retention ranked eighth.[26]

Upskilling and Reskilling Top Priorities as Baby Boomers Exit the Workforce

Approximately four million baby boomers retire each year,[27] creating knowledge gaps in the workforce. Certain industries have been hit harder than others. This calls for organizations to prioritize employee development and invest in upskilling the younger generations.

We now have the data to support that an effective learning and development program (L&D) equates to higher employee satisfaction which has a positive impact on retention.[28] A strong focus on continuous skill development makes good business sense.

Training is a top priority for many organizations, yet only 21% reported being effective in this area.[24] With the aging workforce and nearly one-third retiring, there is an increased focus on employee development.

Rich Lacey
Chief Product Officer, SambaSafety

"Now more than ever, we are seeing employers investing in driver training, and it's paying dividends in reducing risk and improving employee retention."

LABOR SHORTAGE

Demand for labor is predicted to remain strong, with many industry analysts citing labor shortage as a main concern. Limited supply is driving businesses to prioritize employee retention.[29] Others are tapping into less traditional hiring methods like leveraging contractors and gig workers to support their operations. This results in new exposure that businesses should consider when updating their risk and safety programs.

EMPLOYEE DEVELOPMENT PRIORITY AS ONE-THIRD LEAVE WORKFORCE

With the baby boomer generation accounting for nearly one-third of the workforce, employers are focused on closing significant skill and knowledge gaps.[30] The impact to the transportation industry has been significant. Roughly 65% of truck drivers are over the age of 45 and fewer are joining the industry than in previous decades.[31] Chief Economist Julia Pollak at ZipRecruiter noted that trucking had "exhausted the supply of available workers for the first time" in her 2022 analysis.[32]

Licensed Drivers By Age Group 1995-2020

Source: U.S. DOT FHWA Highway Statistics

Legend: CY2000, CY2005, CY2010, CY2015, CY2020
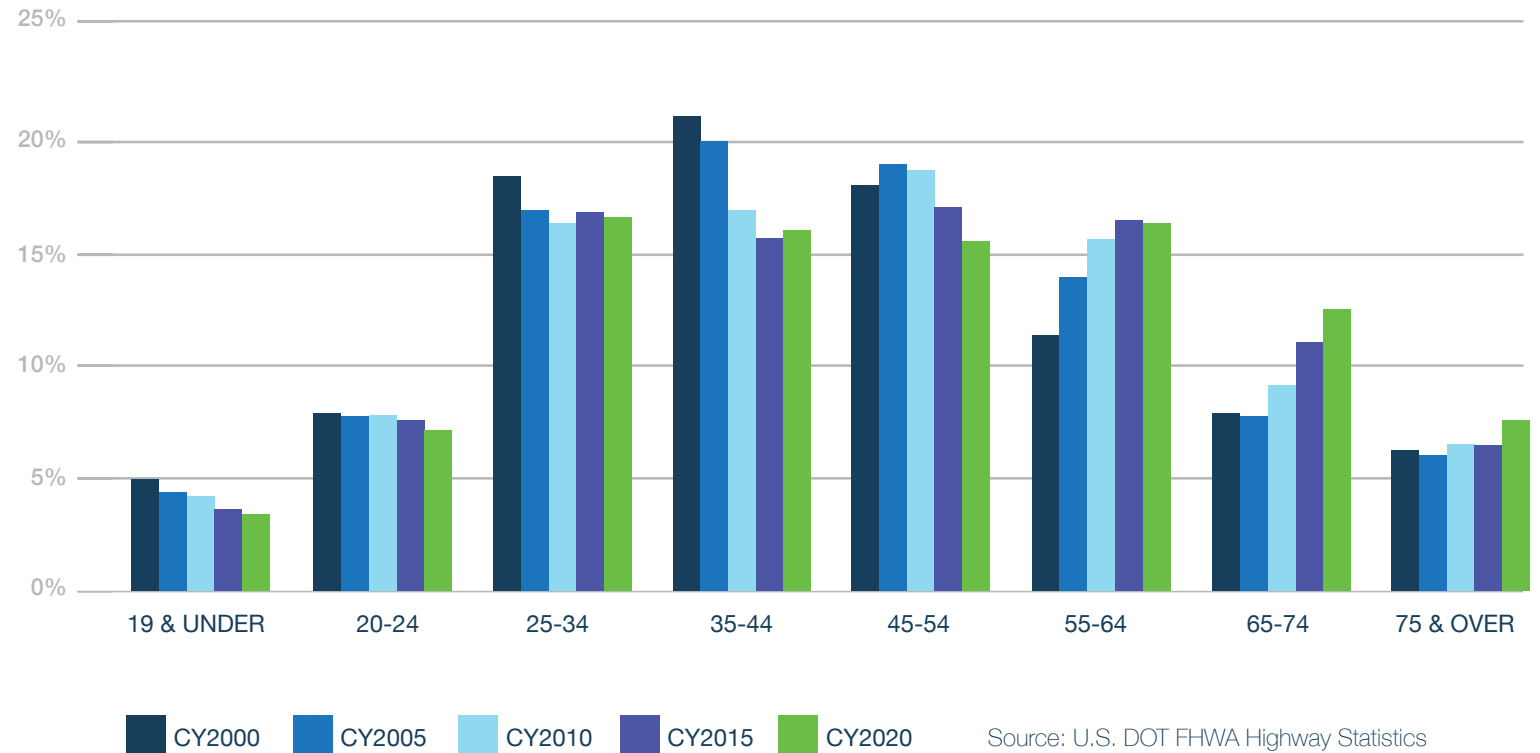
DRIVER SHORTAGE EMPHASIZED AFTER TWO-YEAR MARK
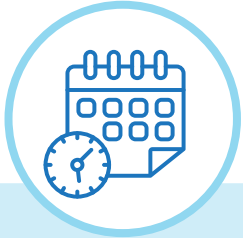
Most insurance policies require at least two years of driving experience for commercial motor carriers, making competition especially fierce for qualified applicants at this narrow point of the hiring funnel.

APPLICANTS WITHOUT EXPERIENCE OUTNUMBER EXPERIENCED DRIVERS 3 TO 1

ONCE MINIMAL TRAINING IS ACHIEVED, THEY START JOB SEEKING OR ARE HUNTED AT 3 MONTHS, 6 MONTHS AND 9 MONTHS

1 YEAR OF SAFE DRIVING (NOW CONSIDERED EXPERIENCED)

2 YEARS DRIVING EXPERIENCE (A PREVALENT MINIMUM)

3 YEARS OF EXPERIENCE, SAFE BACKGROUND, AND/OR FLATBED

TRAINER

HIGHEST LABOR

HAZMAT CERTIFIED/TANKER

TEAMS

NTI | The National Transportation Institute

DRIVING RISKS EVOLVE OVER TIME

Proportion of Violations By Age Group

25.2%

13.5%

16.1%

19.9%

25.3%

The two youngest segments made up **50% of overall violations**
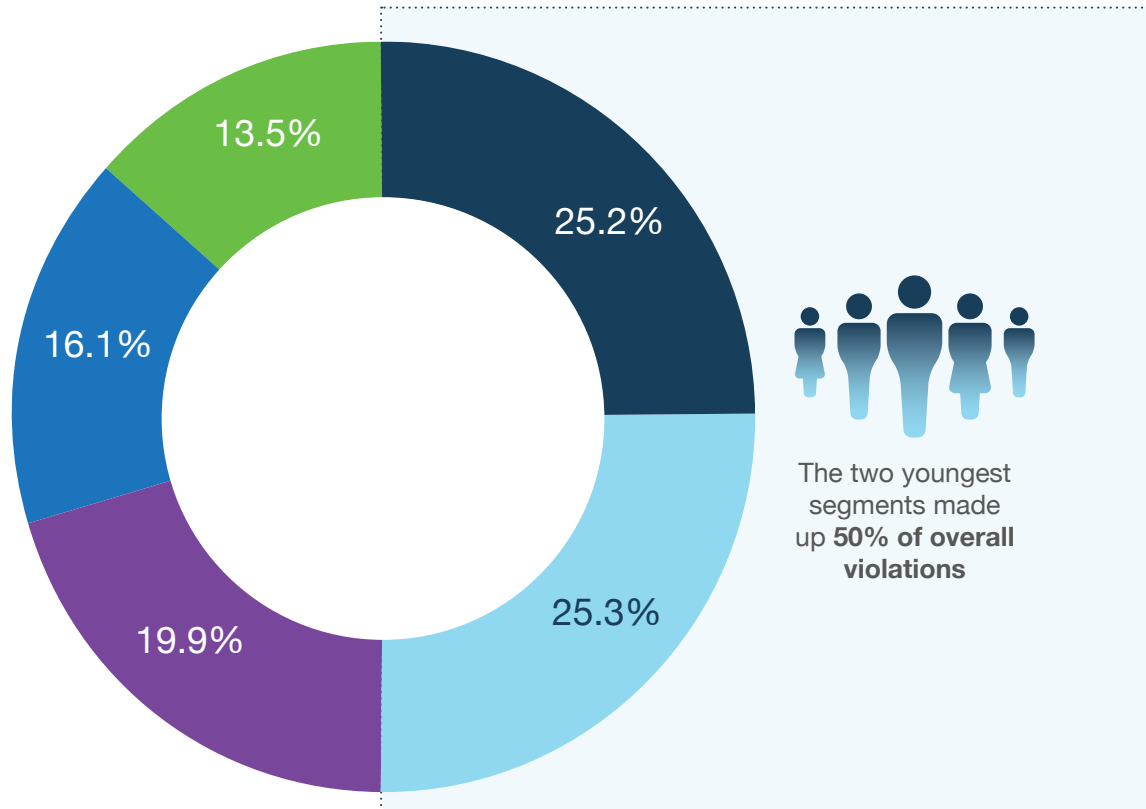
Major vs Minor Violations by Age Group

30.4% Major	69.6% Minor
30.0% Major	70.0% Minor
28.1% Major	71.9% Minor
25.3% Major	74.7% Minor
23.9% Major	76.1% Minor

As expected, drivers improve with experience. After age 35, we notice a decline in both the overall violation rate and the percent of major violations for each category.
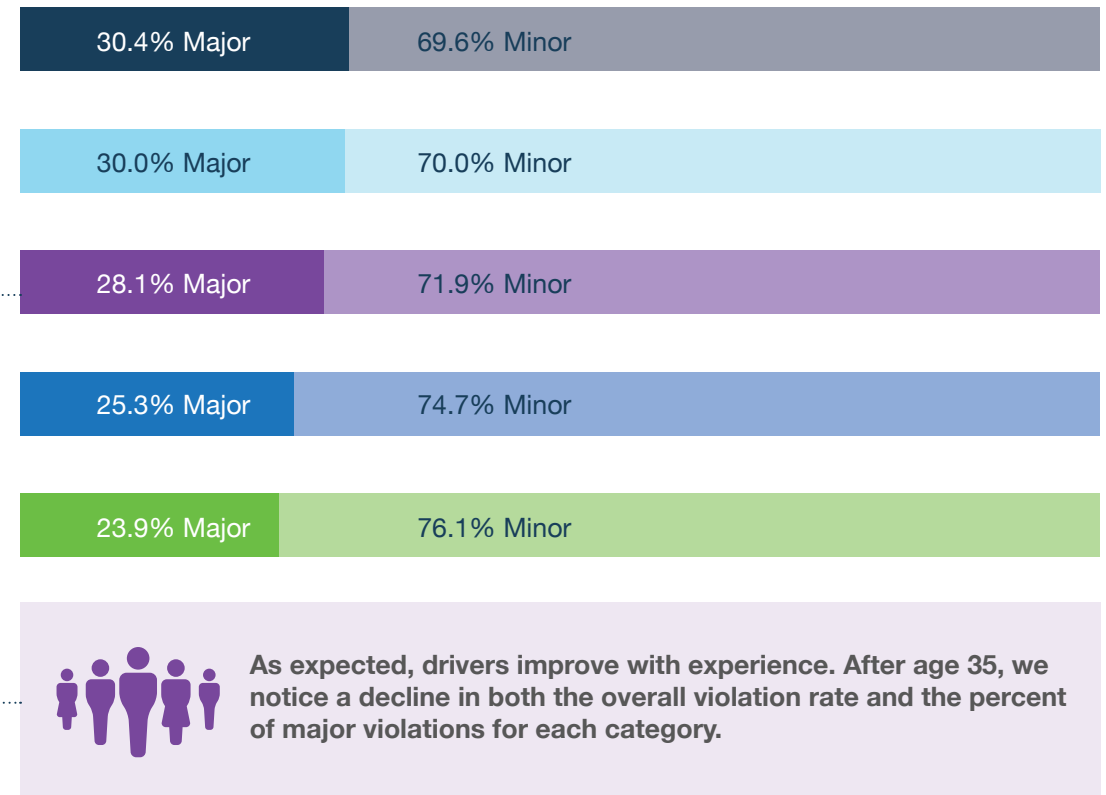
Source: SambaSafety Violation Analysis

| | 18-25 | | 26-35 | | 36-45 | | 46-55 | | 56-65 |

See Appendix A for Major and Minor classifications

DRIVER TRAINING NEEDS CHANGE WITH AGE

In an analysis of the major violation categories by age, SambaSafety found that Documentation (such as suspended or expired license) was a greater issue for younger generations and declined with age, while Maneuver violations (like Texting or Phone Use) increased with age.

Organizations that invest in employee development and regular training, see a 57% improvement in retention.[33] Based on these insights, companies can tailor their training content to proactively address the changing needs of their workforce.

Major Violation Categories by Age Group 2022

Age Group	SPEEDING	MANEUVERS	DOCUMENTATION	VEHICLE-RELATED	ALCOHOL AND/OR DRUGS
18-25	42.9%	19.9%	22.7%	5.2%	9.3%
26-35	33.2%	22.3%	24.7%	4.9%	14.9%
36-45	30.8%	25.5%	22.3%	5.9%	15.5%
46-55	32.3%	27.3%	18.4%	6.9%	15.2%
56-65	32.8%	30.3%	14.2%	8.1%	14.7%
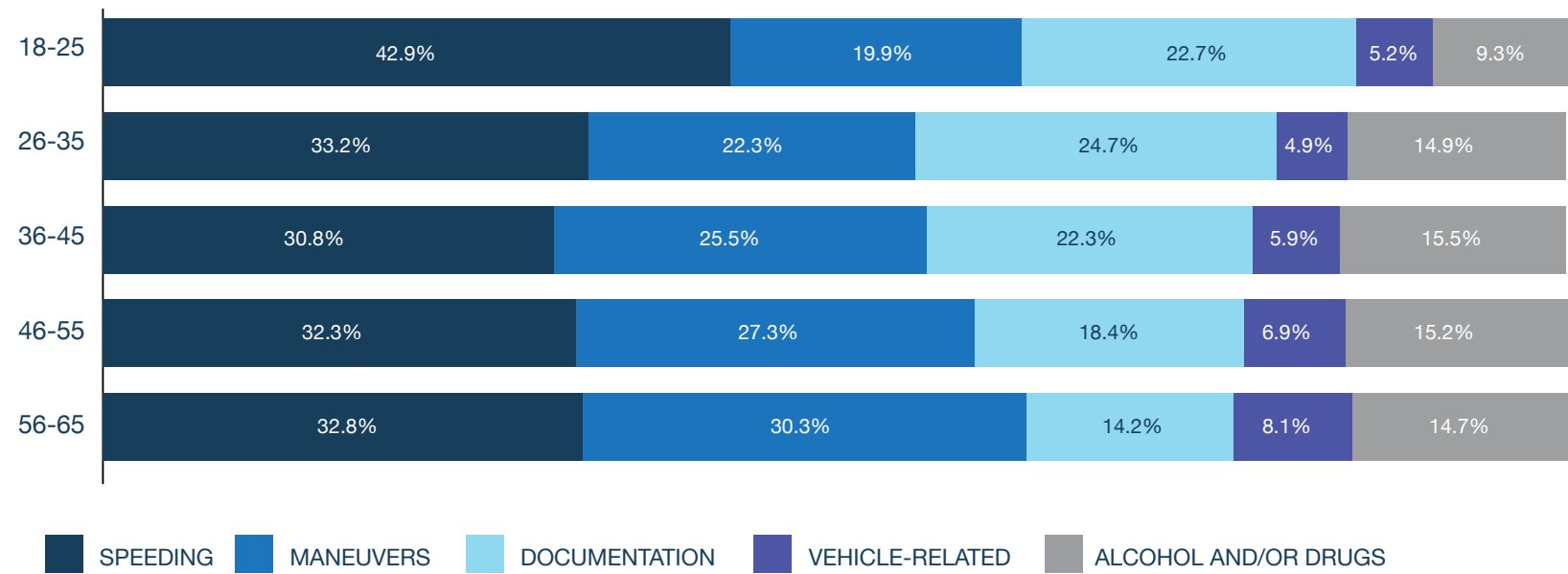
Source: SambaSafety Violation Analysis   See Appendix A for violation categories

Speeding was highest for all age groups

18-25
had the lowest percentage of Alcohol or Drug-related offenses

26-35
had the lowest percentage of Vehicle-Related violations

56-65
had the highest percentage of Maneuver violations

NOVICE DRIVER TRENDS

ACCIDENT STATISTICS

The National Safety Council (NSC) estimates that drivers between the ages of 25 and 34 were involved in 5.02 million crashes in 2022.[34] This segment averaged eight days away from work for non-fatal transportation incidents, one day higher than 20-24-year-olds.

VIOLATION TRENDS

SambaSafety found a similar cohort of drivers, aged 26-35, also had the highest violation rate as well, with 33.9% of licenses recording at least one violation in 2022. The 18-25 year-old segment was a close second, at 33.8%.

When comparing the top 10 violations for the two youngest segments, there were fewer speeding violations in the 26-35 range, while driving under the influence, texting, phone use and driving with a suspended license increased.

- **Driving with blood alcohol content (BAC) of .08 or more ranked second of all major violations and fifth overall for drivers aged 26-35, compared to the younger segment where it ranked twenty-first**

- **Driving with a suspended or revoked license ranked tenth in major violations for 26-35-year-olds**

- **Top 10 major violations for the 26-35 segment included texting (#4) and phone use (#8)**

AGE 25-34

DOWN TIME:

8 DAYS

During 2021-2022, drivers aged 25-34 averaged eight days away from work for non-fatal transportation incidents.[35]

22% of all crashes

Total Number of Drivers in Crashes 2022

NSC Injury Facts
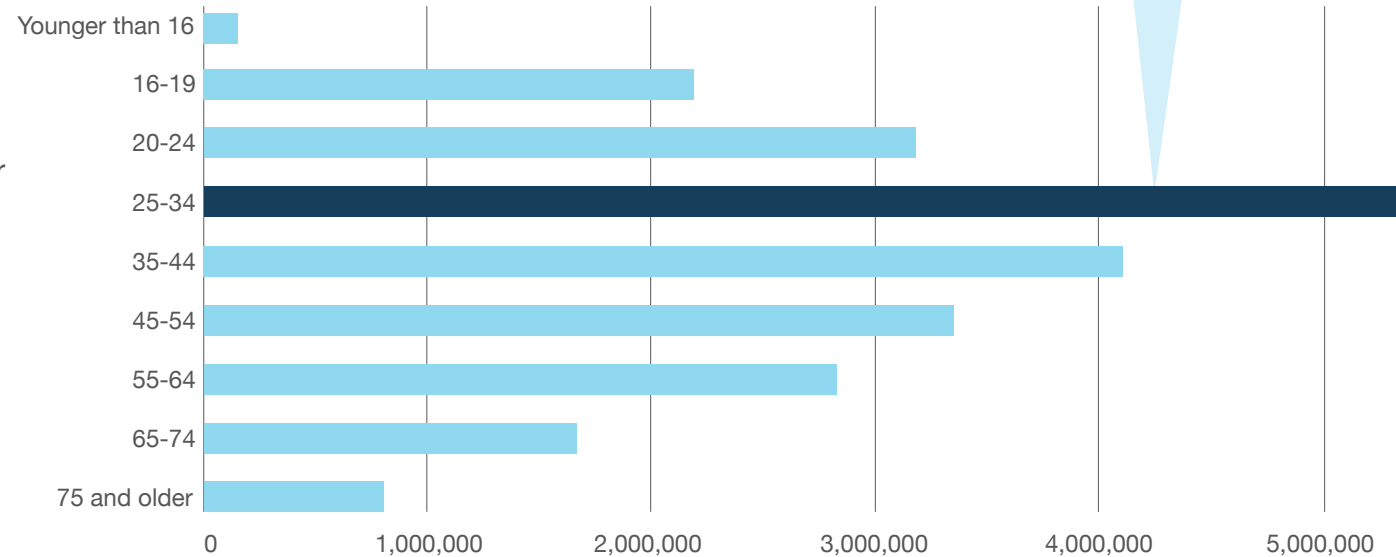
Source: National Safety Council Injury Facts by Age

SPEED & NOVICE DRIVERS

SOUTH CAROLINA HAD THE HIGHEST VIOLATION RATE NATIONWIDE FOR THE TWO YOUNGEST AGE GROUPS
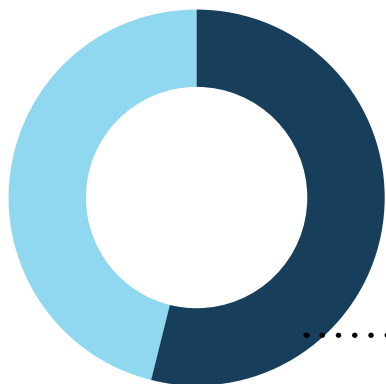
58.6% of South Carolina drivers aged 18-35 had at least one violation recorded in 2022.*
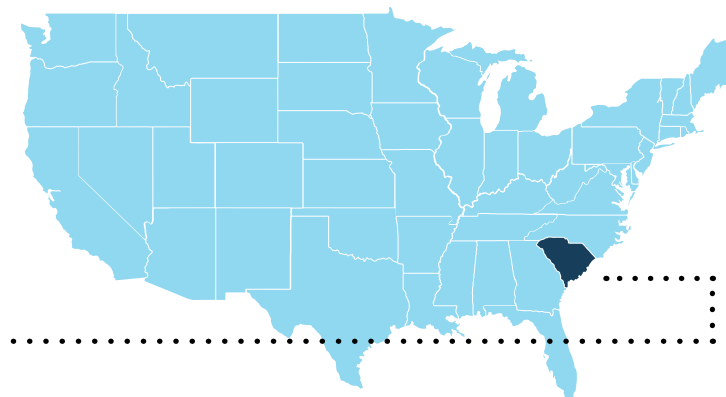
76%
of those violations were speed-related.

1.2X
Speed violations increase the probability of a crash by 1.2x in the next 12 months.[36]

46%
of South Carolina's fatalities were from speeding in 2021.[37]

2nd
South Carolina was ranked as the 2nd most dangerous state.[38]

* Violations per 100 unique licenses

MONITORING AND TRAINING REDUCE VIOLATIONS BY 77%

SAMBASAFETY EFFICACY STUDY

Monitoring and training combined **reduce violations by 77%** in 12 months, more than double that of monitoring alone.

SambaSafety conducted an efficacy study of over four million drivers, analyzing violation activity before and after monitoring.

- After 12 months of continuous monitoring, violations reduced by 32%
- After 24 months of continuous monitoring, violations reduced by 42.5%
- When combined with training, violations reduced by 77%, 12 months after the first training course was completed

32%

42.5%

Continuous License Monitoring

12 MONTHS

24 MONTHS

77%

Continuous Monitoring & Training

6 MONTHS

12 MONTHS
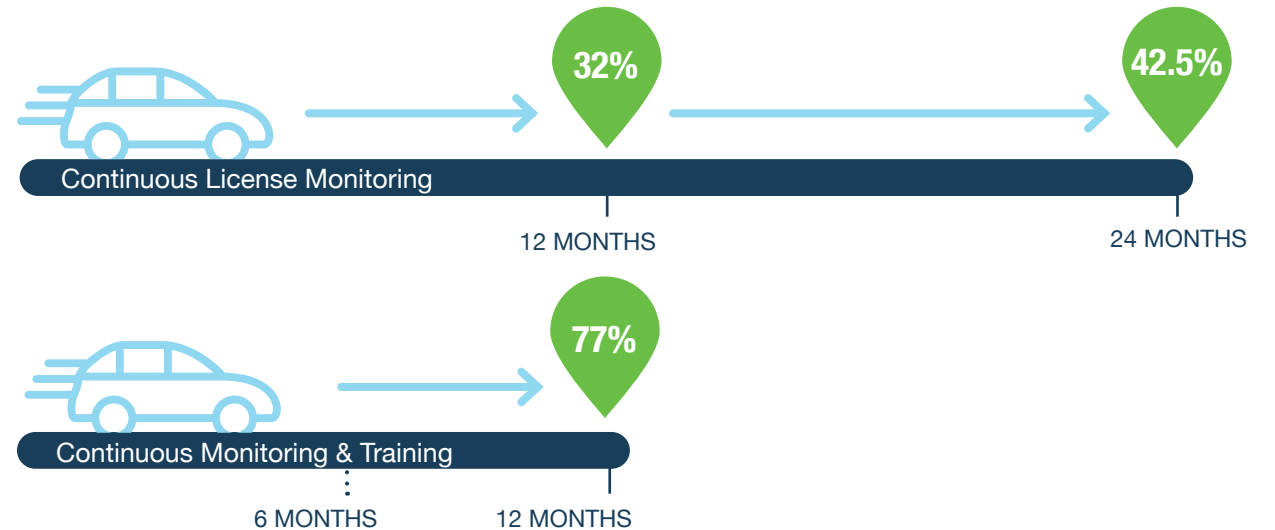
FAST-TRACK RESULTS WITH TELEMATICS

Integrating telematics with monitoring and training can accelerate performance. Telematics devices can generate up to 25 gigabytes of data an hour,[39] complementing the less frequent activity generated from an MVR. SambaSafety distills that data into only the most relevant alerts, so fleets can immediately follow up with targeted training.

This additional layer of on-road behavioral data allows fleets to assign intelligent training even earlier, getting ahead of potential future violations and accidents.

SEPARATE TELEMATICS ANALYSIS

- **Large retail fleet utilizing license monitoring, training and telematics**
- **After one month, improved scores of the highest risk drivers by 40%**
- **After six months, improved overall fleet risk score by 26%**

Source: SambaSafety 2024 Efficacy Study, based on over four million monitored drivers. SambaSafety Telematics case study based on a separate customer analysis.

REGULATORY COMPLIANCE DATA INSIGHTS

Organizations face a stricter regulatory environment in 2024, making it essential for fleets to access accurate data and insights to control risks. Employment trends and social inflation are prompting regulators to consider laws that allow for more flexibility and protection. Roadside inspection and violation trends identify areas of opportunity for commercial motor carriers and drivers. Staying informed and adapting to these changes is key to maintaining safety and compliance in this evolving landscape.

sambasafety

EVOLVING MOTOR CARRIER LAWS IMPACT SAFETY

SambaSafety maintains strong relationships with state and federal agencies to preserve access to driver data vital to public safety. This includes regular engagement with Department of Motor Vehicle (DMV) executive staff and state legislatures as well as the FMCSA. Our collaboration with these organizations allows us to stay ahead of developing regulatory changes and requirements, some of which we have highlighted below.

FMCSA Proposed Changes

A key tool supporting our shared mission of roadway safety is the FMCSA's CSA program, which identifies regulated carriers with higher safety-related events and prioritizes them for intervention. Those selected for intervention have a 65 to 93% higher future crash rate than the national average.[40] We've been closely tracking the FMCSA's proposed Safety Measurement System (SMS) methodology updates, which aim to improve how the Agency identifies and prioritizes motor carriers requiring intervention.[41] We recognize the significant impact this would have on fleets and are prepared to support our customers during this transition.

Another developing topic is a proposed change to CMV age requirements for interstate operations, lowering the minimum age from 21 to as young as 18.[42] While this aims to address the driver shortage, we're tracking its potential safety and compliance implications and strategizing ways to minimize adverse effects.

State Traffic Violation Trends

Several cities, including Los Angeles and Philadelphia, have adopted policies that prioritize traffic stops for safety violations such as running red lights or reckless driving, over violations like expired tags. This allows local law enforcement to invest resources in targeting behaviors directly related to public safety. Denver approved a similar policy on May 1.[43] We are monitoring this trend and the potential impact to violation patterns.

These regulatory trends highlight the need for fleets and insurers to stay informed and collaborate on emerging safety and compliance topics that impact the industry.

Aaron Boyd
Vice President of Government Relations, SambaSafety

"By sharing these insights, we aim to inspire dialogue and unite jurisdictions, fleets and insurers around our common goal of reducing roadway risk within our communities."

2023 CSA RESULTS

MONITORED VIOLATIONS – SAMBASAFETY

SambaSafety's direct integration with the FMCSA enables automated alerts on changes to CDL status as well as citations, roadside inspections and DOT-reportable crashes.

- In 2023, Vehicle Maintenance violations accounted for 59.1% of violations, nearly flat over prior year (.05)

- The top four codes were in the Vehicle Maintenance category:

  - Inoperable Required Lamp

  - Tire-flat and/or Audible Air Leak

  - Clamp or Roto Type Brake Out-Of-Adjustment

  - State Vehicle Registration or License Plate Violation (Critical)

- DOT-reportable crashes for the same cohort (Crash Indicator) experienced 3,822 in 2023, up 1.22% over the prior year

SambaSafety FMCSA Violation Categories

1.66%
1.47%
0.06%
8.44%
12.77%
16.50%
59.10%

VEHICLE MAINTENANCE   NON-CSA*   UNSAFE DRIVING   HOS COMPLIANCE

HAZMAT COMPLIANCE   DRIVER FITNESS   CONTROLLED SUBSTANCES
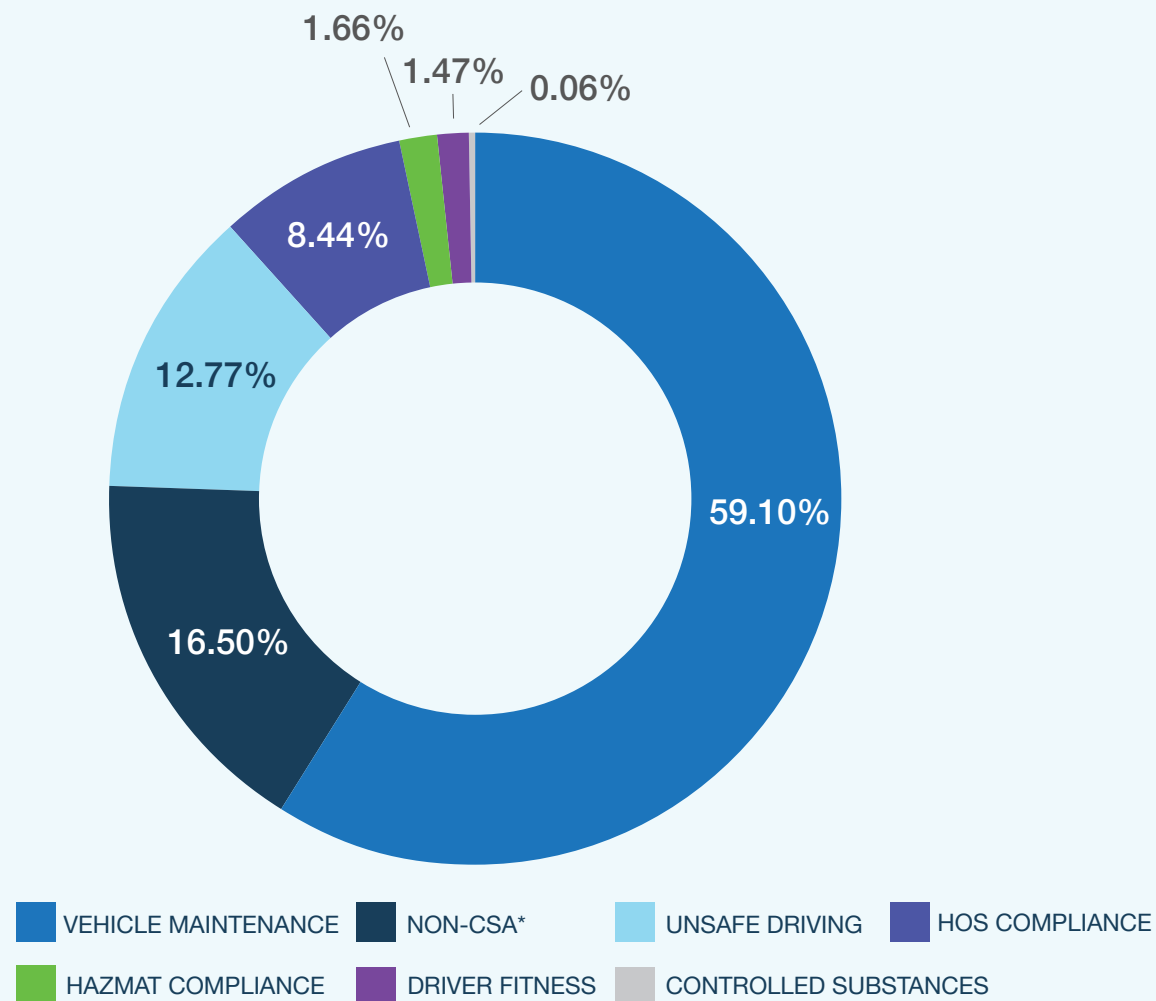
Source: SambaSafety FMCSA Analysis. Based on total of 52,535 FMCSA violations for SambaSafety's monitored fleets CY2023. *Non-CSA Scored category includes any violation that does not impact the FMCSA's Compliance, Safety, Accountability (CSA) program.

SAMBASAFETY TOP 10 FMCSA VIOLATION CODES—2023

Of the top 10 violations for SambaSafety's FMCSA-monitored drivers, six were in the Vehicle Maintenance BASIC and the remaining were Unsafe Driving. Six of the top codes were also found in the top 10 for the FMCSA's industry list for 2023.[44] Inspection, Repair and Maintenance of Parts and Accessories moved down two positions to eighth place in 2023. The same code was ranked 15th on the industry's list. Monitoring Department of Transportation (DOT) inspections and violations, along with MVRs and Telematics events, allows fleets to ensure compliance with the CSA program and improve their overall safety posture.

Rank	Code	Violation Code	BASICS Category	Severity*	In DSMS?	Position Change From PY
1	393.9	Inoperable Required Lamp	Vehicle Maintenance	2	Y	-
2	393.75(a)(3)	Tire-flat and/or Audible Air Leak	Vehicle Maintenance	8	Y	-
3	393.47(e)	Clamp or Roto Type Brake Out-of-Adjustment	Vehicle Maintenance	4	N	-
4	392.2	State Vehicle Registration or License Plate Violation*	Non-CSA**	-	Y	-
5	392.2-SLLS2	State/Local Laws - Speeding 6-10 Miles Per Hour Over the Speed Limit	Unsafe Driving	4	Y	-
6	393.9TS	Inoperative Turn Signal	Vehicle Maintenance	6	Y	▲ 1
7	392.2LV	Lane Restriction Violation	Unsafe Driving	3	Y	▲ 1
8	396.3(a)(1)	Inspection, Repair and Maintenance of Parts and Accessories	Vehicle Maintenance	2	N	▼ 2
9	393.53(b)	CMV Manufactured After 10/19/94 has an Automatic Airbrake Adjustment System That Fails to Compensate for Wear	Vehicle Maintenance	4	N	-
10	392.2C	Failure to Obey Traffic Control Device	Unsafe Driving	5	Y	-

Source: SambaSafety FMCSA Analysis. Results based on SambaSafety customer analysis of monitored fleets for CY2023.

*Severity and In DSMS from Safety Measurement System (SMS) Methodology 2024, Appendix A.

**Non-CSA BASICS Category are State/Local violations that are not scored and do not impact CSA.

DRIVER FITNESS VIOLATIONS

Top Driver Fitness Violations

- **LICENSE-RELATED: HIGH** — 37.4%
- **MEDICAL CERTIFICATE** — 36.5%
- **PHYSICAL** — 19.5%
- **GENERAL DRIVER QUALIFICATIONS** — 2.7%
- **LICENSE-RELATED: MEDIUM** — 2.3%
- **LICENSE-RELATED: LOW** — 1.6%
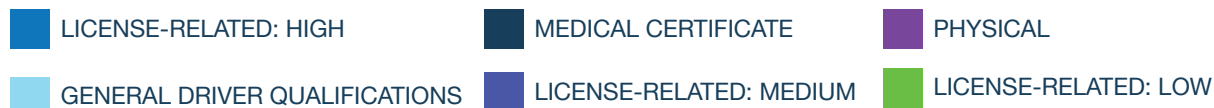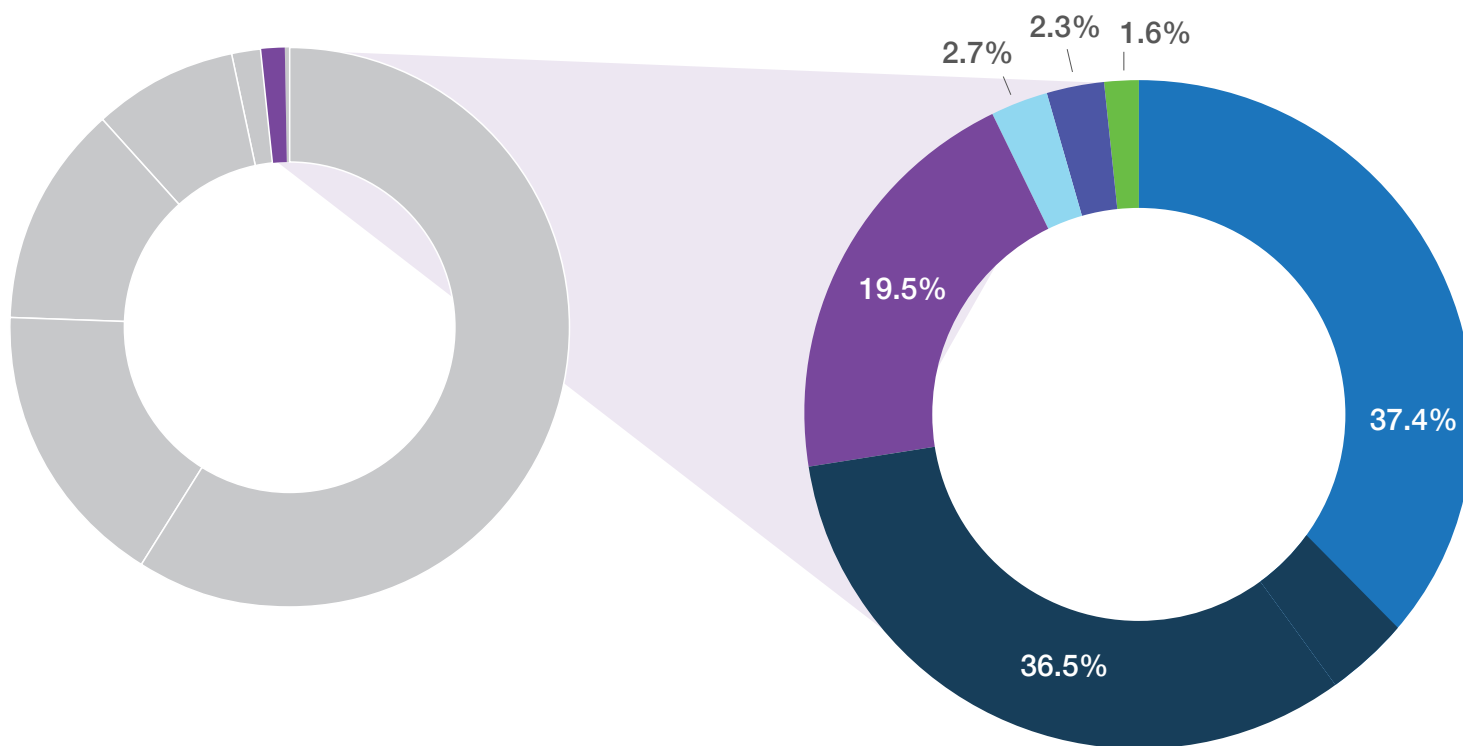
Source: SambaSafety 2023 FMCSA Analysis.

A SIMPLE GAP TO CLOSE

Driver Fitness violations are administrative citations such as an invalid or expired CDL, that often result in a driver being pulled off the road, or Out-of-Service (OOS).

These are highly preventable violations that a robust safety program can proactively address. Companies that focus on improving Driver Fitness have made a significant impact not just on their CSA scores, but customer and driver satisfaction as well.

INVALID LICENSES LINKED TO FATALITIES

Drivers with an invalid license and history of suspension or revocation are **four times more likely** to be involved in a fatal crash.[45]

Drivers Involved in Fatal Crashes, by Previous Driving Record and License Compliance

Category	% of Valid License	% of Invalid License
PREVIOUS RECORDED CRASHES	17.2%	17.2%
PREVIOUS RECORDED SUSPENSIONS OR REVOCATIONS	7.9%	31.8%
PREVIOUS DWI CONVICTIONS	1.7%	8.4%
PREVIOUS SPEEDING CONVICTIONS	17.8%	16.9%
PREVIOUS OTHER HARMFUL MOVING CONVICTIONS	16.6%	24.5%

■ % OF VALID LICENSE   ■ % OF INVALID LICENSE
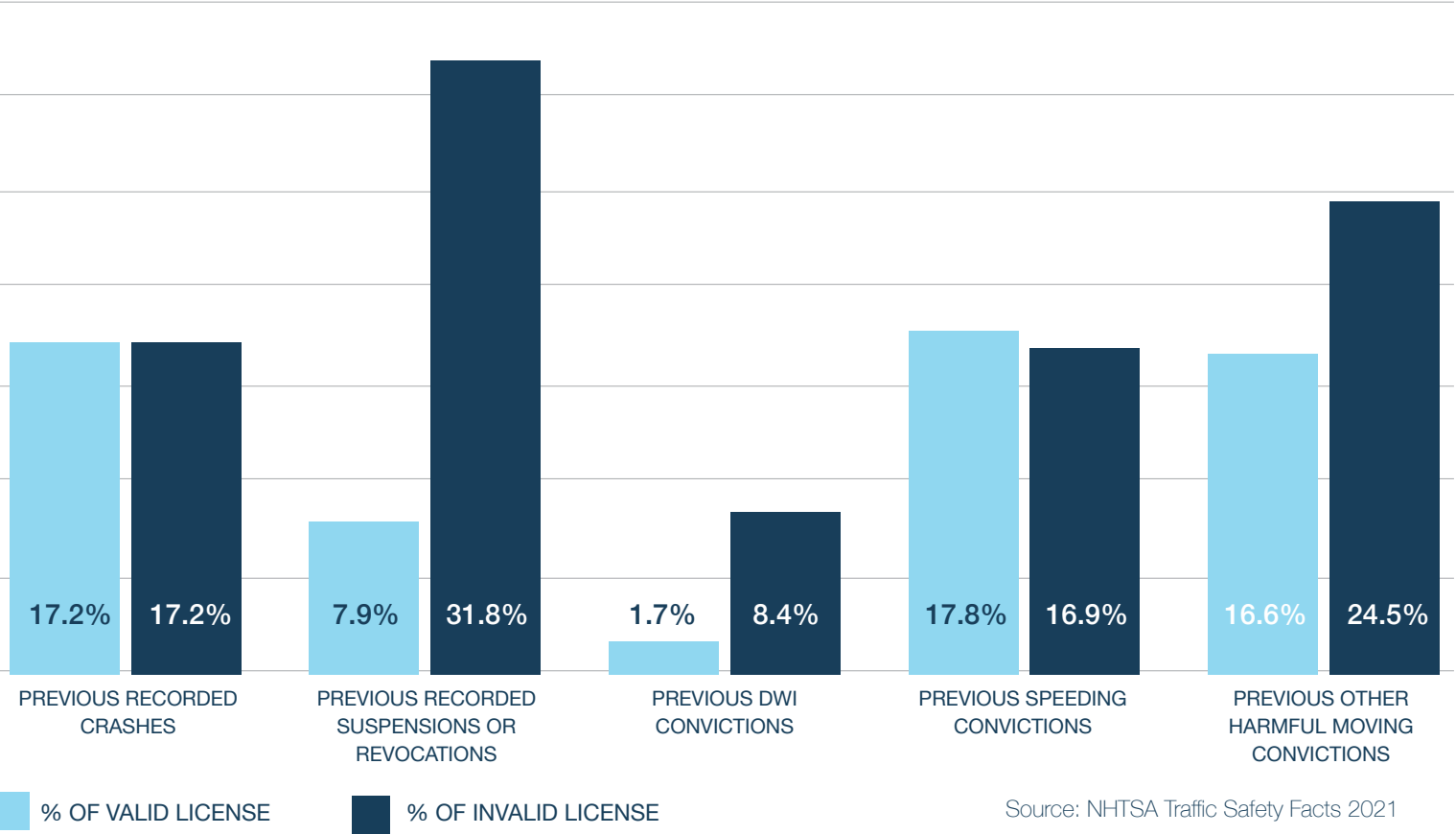
Source: NHTSA Traffic Safety Facts 2021

Drivers Involved in Fatal Car Crashes

18.5% INVALID LICENSES

81.5% VALID LICENSES

Drivers with an invalid license are responsible for **18.5%** or **11,000 fatal auto accidents** in 2021 alone.[46]

Source: NHTSA 2021
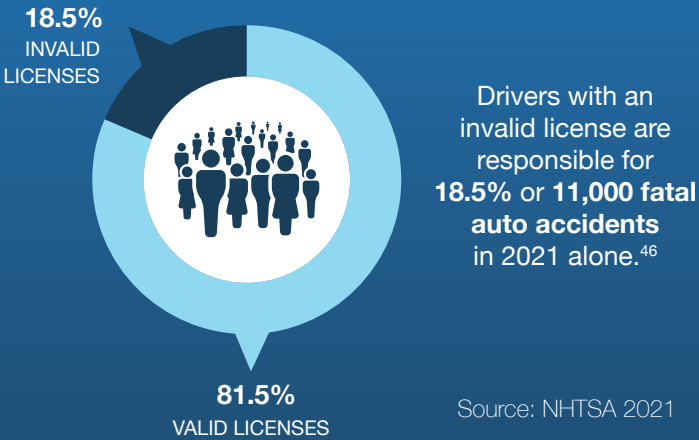
License monitoring can reduce the percentage of unlicensed drivers by 4.4 percentage points for drivers with a personal license and 5.7 for drivers with a CDL.

Percentage of Drivers with Valid License

	PERSONAL	CDL
UNMONITORED	91.76%	92.40%
MONITORED	96.16%	98.13%

■ UNMONITORED   ■ MONITORED
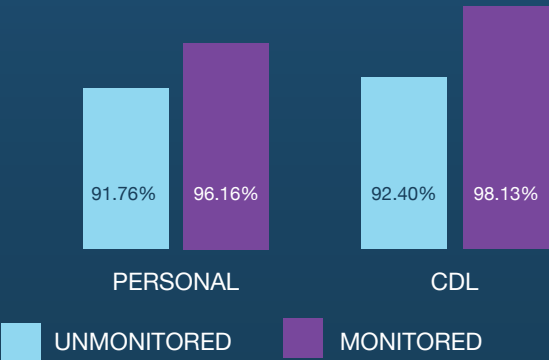
Expired or suspended licenses are often indicative of a bigger problem that might be affecting an employee's well-being. This additional insight can be a catalyst to help an employee that may need additional support.

Source: SambaSafety 2024 customer analysis of monitored and unmonitored drivers.

NORTH AMERICAN GEOGRAPHIC TRENDS

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SambaSafety tracks license violation rates for the U.S. and Canada. Violation rate is calculated per 100 unique licenses and is defined as the percentage of unique licenses with at least one violation. The regional results for calendar year 2022 reflected a 16.8-percentage point gap between the highest region (Mountain, 34.5%) and lowest region (Southwest, 17.7%). The state of North Dakota had the highest increase, up 8.8 percentage points over 2021 results. New York's violation rate decreased by 3.3 points over the prior year.

It's important to note that a higher violation rate doesn't necessarily mean that drivers are riskier in a certain state or region, or that the area is less safe. Violation rates can be influenced by the disparity in enforcement measures across different jurisdictions, affecting the frequency and types of violations issued in each area. Therefore, we recommend normalization across jurisdictions. Depending on the state, certain violations may result in a ticket or fine, but never appear on an MVR. We have observed this in Pennsylvania, where driving without proof of an inspection accounted for five percent of the nine million cases in our court records for the state. This violation is not present on the final MVR and is not counted toward the state's violation rate in the geographic trends.

SOUTHWEST REGION: The Southwest region had the lowest violation rate at 17.7%, down nearly one percentage point from the previous year. The top three violations in the Southwest region were all speeding-related, with no change from 2021. The major speeding violation Exceeding Reasonable and Prudent Speed was third for the region in 2022. The state with the highest violation rate in this region was New Mexico, although they have experienced a continual decrease in their rate over the years, from 35.6% in 2020 to 30.2% in 2022. On the other hand, Arizona has the second-highest violation rate in this region, but has seen a gradual increase in their violation rate year over year since 2020.

MOUNTAIN REGION: The Mountain region experienced a decrease in year-over-year violations, improving by 1.2 points. Colorado had the highest violation rate in the Mountain Region, with 42.1% of licenses with a violation, which was 2.23 percentage points lower than the prior year. Both Colorado and Wyoming saw a two-point decline from 2021. The top three violations across the Mountain Region remained the same from 2021 to 2022, with Driving a Defective/Unsafe Vehicle topping the list.

MIDWEST REGION: The Midwest Region had the second-highest violation rate of 32.4%, nearly flat year over year. The top three violations across the Midwest Region were all minor speeding violations and remained the same from 2021 to 2022. The Midwest state with the highest violation rate in 2022 was Iowa at 42.7%, which was .6 percentage points lower than 2021. Well-known for higher enforcement rates, the state of Ohio came in second, at 41.7%.

SOUTHEAST REGION: The violation rate for the Southeast was 29.7%, up .9 percentage points from 2021. Unlawful Speed was the top violation in 2021, but dropped from the top three in 2022. Equipment: Improper Equipment, Speedometer (minor) went from the second highest violation in 2021 to the top violation in 2022, and Maneuvers: Red Light Camera (minor) entered the top three as the second highest violation in 2022.

MID-ATLANTIC REGION: The Mid-Atlantic Region had a violation rate of 28.9% in 2022, improving by 2.0% from 2021. Unlike the other regions, speeding was not in the top three violation categories in 2021 or 2022 for the Mid-Atlantic region. Instead, their top three violations fell into the Maneuvers, Vehicle-Related and Documentation categories and remained the same from 2021 to 2022, with Maneuvers: Disobeying a Traffic Device (minor) as the top violation both years. The state with the highest violation rate in the Mid-Atlantic Region was New Jersey at 48.9%, which was down 1.83 points from the prior year.

PACIFIC REGION: The Pacific Region's violation rate increased .1 from 2021 to 2022, with 27.1% of licenses with a violation. Oregon had the highest violation rate within this region in 2022 at 37%, which was an increase of .8 percentage points from the year before. Washington and Hawaii had the highest violation rates in 2021, but saw a decrease of multiple percentage points, moving them below Oregon's rate in 2022. The top three violations in the Pacific region were all speed related and remained the same year over year, including a major violation for Unsafe Speed for Conditions.

NEW ENGLAND REGION: The violation rate in the New England region was 24.3%, down 1.9 percentage points since the previous year. Across all states in this region, New Hampshire had the highest violation rate of 33.4%, which decreased annually since 2020. The top violation in this region in 2022 was a documentation-related violation: Failure to Pay Fine and Cost (minor). This moved up from the second-highest violation in 2021, surpassing a minor speeding violation. New England was one of two regions to have an equipment-related violation in their top three, with Operating without Required Equipment (minor) as their third most common violation in 2021 and 2022.

CANADA: Canada experienced the greatest improvement in their violation rate year over year, reducing it by 3.4 percentage points from 2021 to 2022. This region has steadily decreased its violation rate since 2020, reducing it from 29.2% in 2020 to 23.30% in 2022, for a 5.9 points improvement overall. The top two violations in Canada were speeding-related, followed by Maneuvers: Disobeying a Legal Sign (minor) as their number three violation.

OVERALL TRENDS

TOP VIOLATION: SPEEDING
Speeding was by far the most common violation that appeared in the top three regional analysis from 2021 to 2022. Every region except the Mid-Atlantic had at least one speeding-related violation in the top three for both 2021 and 2022.

TOP VIOLATION: NON-SPEEDING
Far behind speeding, Maneuvers was the second most common violation category appearing in the top three across all regions from 2021 to 2022, followed by Vehicle-Related, Equipment and Documentation-related violations.

2022 VIOLATION RATE BY REGION

USA

Canada

Pacific
Mountain
Southwest
Midwest
Southeast
Mid-Atlantic
New England

0.1	1.2	0.9	0.1	0.9	2.0	1.9	3.4
27.1%	**34.5%**	**17.7%**	**32.4%**	**29.7%**	**28.9%**	**24.3%**	**23.3%**
PACIFIC	MOUNTAIN	SOUTHWEST	MIDWEST	SOUTHEAST	MID-ATLANTIC	NEW ENGLAND	CANADA

*Violation rate determined by the percentage of unique licenses that have at least one violation for the calendar year of 2022.

2022 VIOLATION RATE BY STATE

WA 36.3%
MT 34.9%
ND 31.0%
MN 31.8%
NH 33.4%
VT 18.2%
ME 19.6%
OR 37.0%
ID 24.0%
WY 24.5%
SD 17.4%
WI 39.4%
MI 30.7%
NY 24.4%
MA 28.0%
RI 26.0%
AK 31.3%
NV 15.3%
UT 24.1%
CO 42.1%
NE 30.9%
IA 42.7%
IL 27.8%
IN 34.8%
OH 41.7%
PA 23.2%
CT 17.8%
NJ 48.9%
DE 35.7%
WV 29.9%
KY 18.2%
VA 37.2%
MD 20.4%
DC 27.1%
CA 26.5%
KS 24.0%
MO 18.5%
TN 27.2%
NC 33.2%
AZ 27.6%
NM 30.2%
OK 17.8%
AR 20.6%
SC 46.4%
MS 16%
AL 24.9%
GA 34.3%
TX 14.7%
LA 18.2%
FL 30.2%
HI 36.8%

Legend:
- 0%-19%
- 20%-29%
- 30%-39%
- 40%-49%

Source: SambaSafety Violation Analysis. Violation rate determined by the percentage of unique licenses that have at least one violation for the calendar year of 2022.

YEAR-OVER-YEAR VIOLATION RATE BY REGION

Region	State	2020	2021	2022
Pacific	Alaska	32.7%	30.8%	31.3%
Pacific	California	25.6%	26.1%	26.5%
Pacific	Hawaii	43.1%	39.4%	36.8%
Pacific	Nevada	19.0%	17.5%	15.3%
Pacific	Oregon	35.1%	36.2%	37.0%
Pacific	Washington	40.1%	39.5%	36.3%

Region	State	2020	2021	2022
Mountain	Colorado	45.7%	44.3%	42.1%
Mountain	Idaho	25.8%	24.2%	24.0%
Mountain	Montana	36.1%	35.0%	34.9%
Mountain	Utah	26.3%	23.8%	24.1%
Mountain	Wyoming	28.2%	26.7%	24.5%

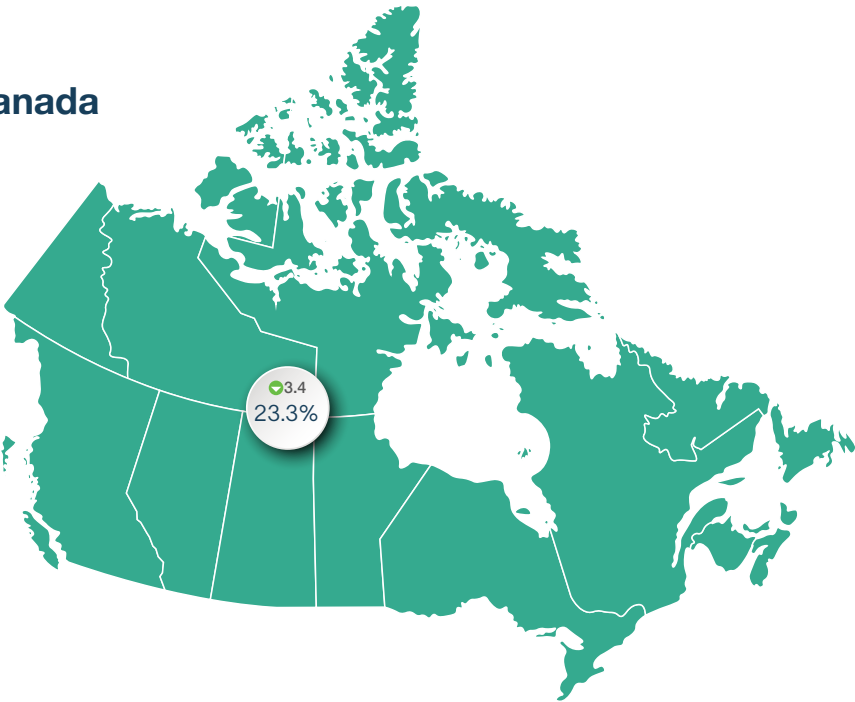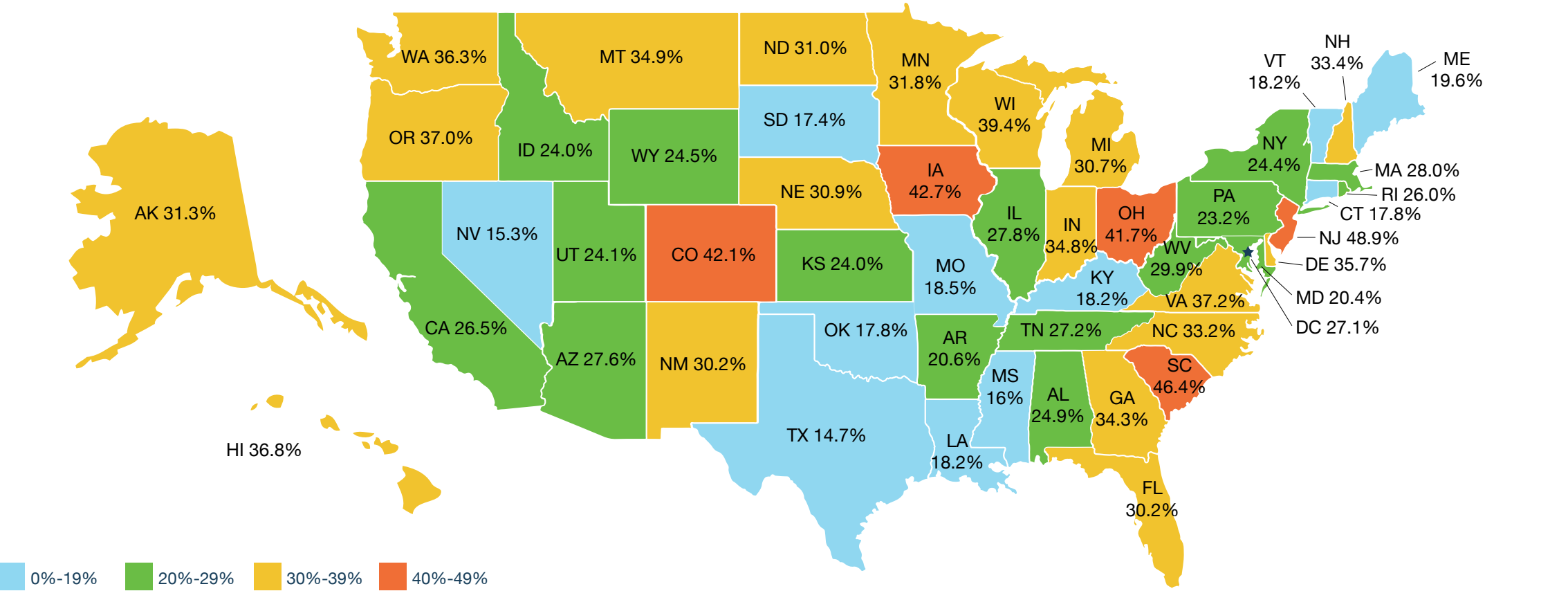| Region	State	2020	2021	2022
Southwest	Arizona	24.6%	26.2%	27.6%
Southwest	New Mexico	35.6%	33.0%	30.2%
Southwest	Oklahoma	21.7%	19.5%	17.8%
Southwest	Texas	17.1%	15.9%	14.7%

Region	State	2020	2021	2022
Midwest	Illinois	30.3%	26.8%	27.8%
Midwest	Indiana	38.7%	35.2%	34.8%
Midwest	Iowa	43.8%	43.3%	42.7%
Midwest	Kansas	26.4%	24.8%	24.0%
Midwest	Michigan	32.5%	31.0%	30.7%
Midwest	Minnesota	32.2%	31.9%	31.8%
Midwest	Missouri	21.3%	19.2%	18.5%
Midwest	Nebraska	35.2%	33.0%	30.9%
Midwest	North Dakota	23.0%	22.2%	31.0%
Midwest	Ohio	45.4%	42.7%	41.7%
Midwest	South Dakota	17.3%	16.6%	17.4%
Midwest	Wisconsin	39.0%	39.5%	39.4%

Region	State	2020	2021	2022
Mid-Atlantic	Delaware	41.3%	37.4%	35.7%
Mid-Atlantic	Dist. of Columbia	31.6%	27.0%	27.1%
Mid-Atlantic	Maryland	22.8%	20.1%	20.4%
Mid-Atlantic	New Jersey	56.0%	50.7%	48.9%
Mid-Atlantic	New York	31.2%	27.7%	24.4%
Mid-Atlantic	Pennsylvania	23.8%	23.3%	23.2%

Region	State	2020	2021	2022
Southeast	Alabama	24.9%	24.5%	24.9%
Southeast	Arkansas	20.7%	20.9%	20.6%
Southeast	Florida	30.1%	25.6%	30.2%
Southeast	Georgia	34.3%	33.8%	34.3%
Southeast	Kentucky	19.1%	17.6%	18.2%
Southeast	Louisiana	21.4%	19.7%	18.2%
Southeast	Mississippi	18.7%	17.9%	16.0%
Southeast	North Carolina	37.4%	34.7%	33.2%
Southeast	South Carolina	49.1%	46.6%	46.4%
Southeast	Tennessee	28.9%	27.1%	27.2%
Southeast	Virginia	41.7%	40.1%	37.2%
Southeast	West Virginia	32.1%	31.0%	29.9%

Region	State	2020	2021	2022
New England	Connecticut	25.6%	21.1%	17.8%
New England	Maine	23.4%	21.7%	19.6%
New England	Massachusetts	31.0%	29.3%	28.0%
New England	New Hampshire	37.1%	34.7%	33.4%
New England	Rhode Island	28.2%	26.6%	26.0%
New England	Vermont	24.9%	20.9%	18.2%

Region	2020	2021	2022
Canada	29.20%	26.70%	23.30%

PAVING THE WAY FOR SAFER ROADS AND SUSTAINABLE FUTURES

As we conclude our first annual *2024 Driver Risk Report*, it's clear that the challenges facing the automotive industry are both persistent and evolving. From labor shortages and regulatory shifts to increasingly complex driving behaviors, the road to safer mobility demands innovative solutions and collaborative efforts. This report, drawing on SambaSafety's extensive data sources, provides a foundation upon which industry stakeholders can build more effective and adaptable risk management strategies.

Throughout this report, insights from our experts have underscored the importance of proactive approaches to driver safety and the critical role of data-driven decisions. The emerging trends and patterns revealed through our analysis not only highlight areas of concern but also illuminate paths to improvement. By integrating sophisticated monitoring technologies and embracing the nuances of driver behavior, we can address the root causes of risk and significantly enhance the safety and efficiency of automotive operations.

Looking ahead, SambaSafety remains committed to leading the industry toward a future where data empowers action and where strategic collaborations transform potential hazards into opportunities for advancement. We thank you for your dedication to this vital cause and invite you to join us in this ongoing journey to reduce risk, improve performance and ultimately, save lives.

Together, let us take these insights forward, implementing the lessons learned to foster safer driving environments and resilient automotive communities. Your engagement and proactive measures will undoubtedly contribute to shaping a safer, more compliant and profitable industry.

ABOUT SAMBASAFETY

SambaSafety is a recognized innovator and leading provider of cloud-based risk management solutions for over 15,000 organizations with automotive mobility exposure, including many on Fortune's Global 500 list. Employers and insurers benefit from SambaSafety's continuous monitoring, intuitive insights, risk reduction tools and configurable pricing solutions. Through the collection, correlation and analysis of federal, state, local and telematics data sources, our flexible, end-to-end capabilities enable businesses and insurers to better evaluate and mitigate driving risk, accelerate product development, reduce crashes and foster safer communities.

SHAPE THE FUTURE OF INDUSTRY INSIGHTS WITH SAMBASAFETY

Do you have questions for our team or ideas for future chapters of our driver risk report?

SUBMIT THEM HERE

SambaSafety leverages a unique and highly complementary array of data sources to provide a comprehensive view of driver risk. Each source brings a distinct dimension to our cloud-based capabilities.

Telematics data, aggregated from a variety of leading providers, offers high frequency variables related to driving behaviors and high-risk trips.

Dashcams provide real-time visual evidence from vehicles to corroborate incident reports and driver monitoring.

Court data from thousands of local jurisdictions offers insight into citations and criminal activity, offering a spectrum of services to evaluate risk ahead of or in place of an MVR.

MVR data sourced directly from state DMVs across U.S. territories and Canadian provinces, ensuring accurate, up-to-date driver status and history.

CSA data data including inspections and DOT-reportable crashes for regulated fleets monitored by the FMCSA.

EXPERT CONTRIBUTORS

John Barbagallo

John Barbagallo, an insurance executive with nearly 40 years of experience in the insurance industry, is a Strategic Advisor at SambaSafety. As former President of Commercial Lines at Progressive, he played a central role in pioneering advancements with telematics that helped capture market-leading positions in Commercial Auto. John has a proven ability to construct and lead insurance organizations that effectively utilize technology and data to drive profitable growth, elevate decision-making capabilities and foster a culture of continuous process improvement. John views predictive data, including telematics, as vital for insurers and is excited to partner with SambaSafety to continue to drive innovation in the insurance industry.

Rich Lacey

As Chief Product Officer, Rich Lacey directs and oversees SambaSafety's global product strategy, development and implementation of new solutions. He brings over 30 years of experience in development, architecture and product management for industry-leading technology companies. Over the last decade at SambaSafety, he has led a team through multiple acquisitions, expanding the set of capabilities to include training and telematics for over 15,000 customers and more than 4.25 million monitored drivers. Rich is a regular speaker at industry conferences on topics such as technology, security and risk management. He is passionate about creating products that solve real-world problems and make a positive impact on society.

Aaron Boyd

As Vice President, Government Relations, Aaron Boyd directs government relations with the federal government, U.S. states, and Canadian provinces. Previously, Aaron spent 14 years in various roles with state data provider NIC, Inc. and its affiliates, most recently as President and General Manager of NIC's wholly-owned subsidiary, New Mexico Interactive, LLC where he was responsible for dissemination of the Motor Vehicle Division's data as well as provision and maintenance of online services. During his tenure with NIC, Aaron also worked in operational management roles with Tennessee, Arkansas and Colorado state government partners. Aaron is deeply involved with the American Association of Motor Vehicle Administrators (AAMVA) and is currently Board President of the Coalition for Sensible Public Records Access (CSPRA).

APPENDIX A: VIOLATION CATEGORIES & CLASSIFICATION

SambaSafety groups similar MVR violations into categories, then further segments them into Major and Minor categories, based on the severity of the offense. Below are common examples of this categorization.*

From 2020 to 2023, these 3 categories accounted for approximately 80% of all major violations

MAJOR

SPEEDING

Exceeding the posted speed limit while driving.

Examples:
- **Excessive speed over limit (e.g. 16-100+)**
- **Unsafe speed for conditions**
- **Speeding in a school zone**

MANEUVERS

Violations related to actions taken by the driver while turning, stopped, passing, etc.

Examples:
- **Careless driving**
- **Reckless driving**
- **Inattentive/distracted driving**
- **Phone use/texting**

DOCUMENTATION

Driving with missing, incorrect or outdated documentation or non-compliance with other court-imposed orders.

Examples:
- **Driver unlicensed**
- **Driving while suspended/revoked**
- **Expired DL/CDL/permit**
- **Improper/fictitious registration/title/plate**
- **Failure to pay child support**

MINOR

- Minor speeding over the limit

- Failure to obey
- Improper lane change
- Failure to yield right of way
- Following too closely

- Unregistered vehicle
- Failure to appear for trial/court
- Failure to pay fine
- No proof of insurance

MAJOR

VEHICLE-RELATED

Operating a defective or unsafe vehicle, illegal parking or stopping the vehicle, or committing other vehicle-related offenses.

Examples:
- **Drove defective/unsafe vehicle**
- **Failure to control the vehicle**
- **Auto theft**
- **Vehicular assault**

ALCOHOL AND/OR DRUGS

Operating a vehicle after consuming alcohol and/or drugs or possessing them unlawfully while driving.

Examples:
- **Operating while intoxicated**
- **Driving under the influence**
- **Possession of open container**
- **Ignition interlock violation**

EQUIPMENT

Operating a vehicle that lacks proper equipment, including the absence of seatbelts and child restraint devices.

Examples:
- **N/A**

MINOR

- Parking violation
- Exceed allowed size/weight limit
- Improper stop/stand/park
- View obstructed

- N/A

- Improper tires, brakes, lights, glass
- Seatbelt violation
- Emissions control device
- No/improper child restraint device

*In addition to the above categories, SambaSafety also tracks violations in the following categories: Accidents, Criminal and CDL Only. However, violations in these categories are not consistently enforced or reported from state to state, so these violation categories were omitted from our analysis to maintain consistency.

APPENDIX B: CSA BASICS

The FMCSA's SMS uses data from roadside inspections, crash reports and investigations to score carriers in seven categories referred to as "BASICs" - Behavior Analysis and Safety Improvement Category (BASIC). Motor carriers are grouped by BASIC with others that have a similar number of safety events then ranked and assigned a percentile to help identify and intervene with carriers that pose the greatest risk to safety. SambaSafety monitors for CSA violations and inspections. **Drivers identified for CSA interventions have a 65-93% higher future crash rate than the national average.**[47]

Carriers with a score of 65% or higher in these BASIC categories are subject to FMCSA investigation (50%+ for HazMat or passenger transport)

UNSAFE DRIVING

Ensures drivers are abiding by traffic safety laws to prioritize interventions for repeated incidents.

Examples:
- Speeding
- Reckless driving
- Improper lane change
- Inattention
- Cell phone use

CRASH INDICATOR

Evaluates a carrier's history or patterns of high crash involvement in terms of frequency and severity, helping identify behaviors that contributed to those crashes and address safety problems.

Examples:
- State-reported crashes

HOURS-OF-SERVICE (HOS) COMPLIANCE

Requires rest for all large truck and bus drivers to reduce the risk of fatigued driving.

Examples:
- Operating more hours than allowed under HOS regulations
- Falsification of Records of Duty Status (RODS)

VEHICLE MAINTENANCE

Enforces pre- and post-trip inspections, recording of vehicle defects and proper repair prior to operating the vehicle.

Examples:
- Operating an OOS vehicle
- Inoperative brakes, lights, and/or other mechanical defects
- Failure to make required repairs
- Improper load securement
- Spilled or dropped cargo

CONTROLLED SUBSTANCES/ ALCOHOL

Deals with the operation of CMVs by drivers who are impaired due to alcohol, illegal drugs or the misuse of medications.

Examples:
- Failing an alcohol test (alcohol level of .02 or greater)
- Operating under the influence of illegal drugs

HAZARDOUS MATERIALS (HM) COMPLIANCE

Ensures adherence to specific requirements for safely transporting HM and special attention to the packaging, labeling, loading and attendance.

Examples:
- Failing to mark, label or placard in accordance with the regulations
- Not properly securing a package containing HM
- Cargo tank specification testing, loading/ unloading, attendance and leakage

DRIVER FITNESS

Identifies drivers who are unfit to operate a CMV due to a lack of training, experience, medical qualifications or up-to-date records.

Examples:
- Failure to have a valid and appropriate CDL
- Being medically unqualified to operate a CMV
- Other out-of-date records: state driving records, annual reviews of driving records, employment applications, etc.

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