

FMCSA's Safety Measurement System (SMS): Understanding Today, Preparing for Tomorrow

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Gary Petty
President & CEO
National Private Truck Council

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Thank You for Joining Us!

- This webcast will cover ...
 - A regulatory overview
 - Best practices in compliance
 - A case study in implementation
 - Question & Answer session
- You will be muted during the event.
- Please use the Q&A feature to send in questions. We'll try to answer them during the Q&A period if they are not covered in the presentation.
- The slides and recording will be posted within 7 days at:
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Meet Your Speakers



Tom Bray
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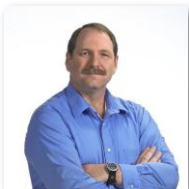


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Tom Bray
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Audience Poll:

How often do you log in to the SMS to review your scores and other data?

- Daily
- Weekly
- Monthly
- Quarterly or on occasion
- Help! I have never logged in

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Compliance Safety Accountability

- Not a regulation or group of regulations
- Enforcement tool used to select carriers for intervention
- On-road performance generates the scores in CSA's Safety Measurement System
 - Roadside inspections (compliance with the FMCSA Safety Regulations)
 - Crashes
 - Past enforcement action violations also considered

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Current Methodology – The BASICS

- Safety-related events are divided into BASICS
 - Unsafe Driving (Part 392)
 - Crash (DOT-recordable crashes)
 - Hours-of-Service Compliance (Part 395)
 - Vehicle Maintenance (Parts 393 and 396)
 - Controlled Substance (Drug) and Alcohol (Parts 382 and 395)
 - Hazardous Materials Compliance (HMRs)
 - Driver Fitness (Parts 383 and 391)

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Current Methodology – Time and Severity

- Each safety related violation on a roadside inspection reports is assigned to a BASIC and then:
 - Severity weighted (1 to 10 – plus 2 if violation resulted in OOS order)
 - Time weighted (1 to 3)
 - Violation total value is severity weight multiplied by time weight
- Crash BASIC works the same way; each DOT-recordable crash is:
 - Severity weighted (1 to 3)
 - Time weighted (1 to 3)
 - Crash total value is severity weight multiplied by time weight

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Current Methodology – Monthly Calculations

- Once a month a BASIC Measure is calculated in each BASIC
 - Time and severity violations are totaled
 - This total is then divided by a “normalizing factor” to create the BASIC Measure
- Normalizing factors
 - Unsafe and Crash: Average number of power units multiplied by a utilization factor
 - Calculation is weighted number of violations/crashes per power unit
 - Other BASICs: Total of time weighted relevant inspections (driver, vehicle, or HM)
 - Time weighting 1 to 3

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Current Methodology – Monthly Calculations

- BASIC Measures are then compared to other carriers with similar on-road exposures (Safety Event Groups)
 - Unsafe: Number of inspections with a violation and vehicle type (straight or combo)
 - Crash: Number of crashes and vehicle type (straight or combo)
 - HOS, Vehicle, Drug and Alcohol, HM, and Driver Fitness: Number of relevant inspections

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Current Methodology – Final Score

- Unsafe and Crash BASICs Safety Event Groups segmented by vehicle type (straight versus combo – straight = 30% straight vehicles)
- Carrier in the Safety Event Group with best BASIC Measure (lowest) given score (percentile rank) of “0”
- Carrier in the Safety Event Group with worst BASIC Measure (highest) given score (percentile rank) of “100”
- All others ranked between these two extremes based on their BASIC Measure
- If you are above 50, you are below average for your group

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Intervention Thresholds

- Scores are then compared to Intervention Thresholds
- To “pass,” must be below the threshold in all BASICs

BASIC	Intervention Thresholds		
	Passenger Carrier	HM	General
Unsafe Driving, Crash Indicator, HOS Compliance	50%	60%	65%
Vehicle Maintenance, Controlled Substances/Alcohol, Driver Fitness	65%	75%	80%
HM Compliance	80%	80%	80%

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Consequences

- BASIC over the threshold, something is going to happen
- The more BASICs over the threshold and the higher the scores in those BASICs, the more severe the intervention
 - Targeted roadside inspections (ISS of Optional or Inspect)
 - Warning letter
 - Focused investigation when resources are available
 - Compliance review or focused investigation as soon as possible
 - Compliance review within 90 days

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Proposed New Methodology

- BASIC reorganization
 - BASICs become Compliance Categories
- Vehicle Maintenance BASIC split into:
 - Vehicle Maintenance – Maintenance-related defects
 - Vehicle Maintenance: Driver Observed – Defects a driver could see during a walkaround-type pretrip
- Drug and Alcohol BASIC eliminated and violations moved to Unsafe Driving Category
- All operating while OOS moved to Unsafe Driving Category

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Proposed New Methodology

- Violation scoring changes
 - Violations to be scored based on “groups,” not each individual violation
 - 2,000 current violations put into roughly 100 groups
 - Example:
 - Driver over 11-, 14-, and 60/70-hours limits during an inspection
 - All in the same Violation Group, so scored as one violation
 - Violation severity weights either 1 or 2
 - 1 – Not an OOS or disqualifying violation (Unsafe Driving)
 - 2 – One of the violations in the group resulted in an OOS order or was a disqualifying violation

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Proposed New Methodology

- Calculating Measures and Scores
 - Updated Utilization Factors in Unsafe and Crash
 - Not scored if no violation in the last 12 months in HOS, Vehicle Maintenance, Vehicle Maintenance: Driver Observed, HM, and Driver Fitness
 - Expanded segmentation
 - HM segmented into cargo tank versus non-cargo tank (50% cutoff)
 - Driver Fitness segmented into straight versus combo (same as Unsafe and Crash)
 - Final score in each Compliance Category based on average of score in current Safety Event Group and next nearest

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Proposed New Methodology

- Intervention threshold changes
 - New intervention thresholds in Driver Fitness and HM
 - Driver Fitness Compliance Category
 - 80% to 90% for general carriers
 - 75% to 85% for hazardous material (HM) carriers
 - 65% to 75% for passenger carriers
 - Hazardous Materials Compliance Category
 - 80% to 90% for all carriers

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Proposed New Methodology

- Did not choose Item Response Theory (IRT) Model
- Using same structure
- Date for implementation not know
- For now, carriers can see scores in current SMS and preview of scores in new SMS methodology

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Premise is NOT Changing

- Crashes and roadside inspections violations are still being measured and scored monthly
- Crash and roadside issues will still lead to intervention
 - If you have more or more severe crashes and violations than similar carriers, you will likely end up the subject of an intervention
- “Passing” still means being below the threshold in all Compliance Categories
- Bottom line: Still need to take proactive actions to prevent crashes and roadside inspection violations

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Best Practices in Fleet Compliance

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Let's Begin With the Premise....

- CSA is not perfect
- It's the best thing we have to:
 - Measure performance
 - Improve performance
- Provides a valuable dashboard
- Gets bad actors off the road
- Proposed changes should make it more effective

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CSA Scores

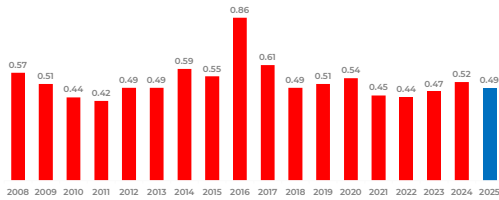
	Unsafe Driving	Fatigued Driving	Driver Fitness	Vehicle Maintenance	Crash Indicator	Controlled Substances & Alcohol	Hazardous Materials
2024	12	14	9	26	23	1	3
2025	10	9	10	24	16	1	2

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DOT Recordable Accidents

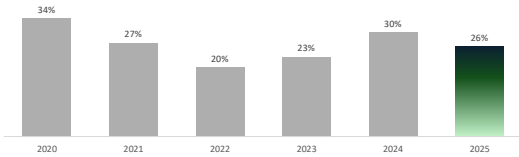


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Percent of The Accidents In Which The Fleet Was at Fault



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CSA: A Valuable Dashboard

- CSA scores are an objective look at how your fleet is operating
- Failing to address the issues exposed by roadside inspections and CSA overall is inviting certain liability
 - While some information on CSA is not viewable by the public, it is easily obtainable by plaintiffs' attorneys
 - BASIC scores can and will be used against your company in a court of law should litigation be brought as a result of an incident and if BASIC scores can bolster the plaintiff's case

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Improving CSA Scores – Short Term Actions

- Get good data going into the system
 - Good data means “no violation” inspections and no preventable crashes
- Take advantage of the DataQs process: users may request the review of various types of data including:
 - crash data reflecting a CMV involved in a reportable crash;
 - data documented during a roadside safety inspection;
 - data collected during investigations;
 - registration data
- Review all roadside inspections to check for errors, contest incorrect violations
- Know and correct your problems immediately

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Improving CSA Scores – Long Term Strategies

- Know your data
- Measure, monitor, manage and improve
- Improve driver hiring processes
- Communicate, educate and train
- Use the data to target and improve training
- Driver safety bonuses
 - Crashes preventable v. non-preventable
 - Violations (HOS and Moving Violations)
 - Roadside Inspections (Examples: HM Compliance, Driver Fitness, Unsafe Driving)

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CSA Journey



CHANGES TAKE TIME



BE PROACTIVE



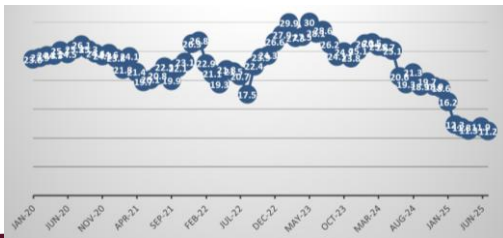
FOLLOW TRENDS &
TRACK SCORES

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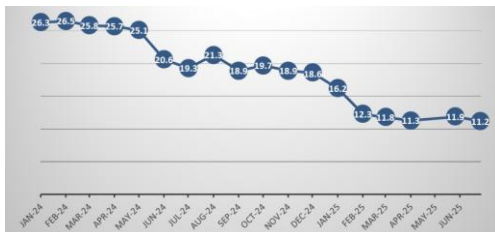


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DTI CSA Index



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CSA Barriers

Not understanding CSA program

Education & Training – Mgmt & Drivers

Just a warning...

CSA Handbooks

Accountability

Remote Drivers

Multiple D.O.T. Numbers

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Inspection Selection System (ISS)



PASS 1 - 49



OPTIONAL 50 -74



INSPECT 75-100

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Driver Accountability on Violations

Discipline

Training

Time off

Loss of bonus

Speed reduction

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CSA Incentive Plans

- Do you pay for clean inspections?
- Developed a quarterly Safety/CSA bonus plan
 - Driver can earn over \$4500 annually by qualifying
 - Review program annually (Increase \$'s and Qualifiers)
 - Continue to add incentive programs as needed (Safety/MPG)
 - Keep it simple and easy to understand for everyone

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Driver Safety/CSA Quarterly Bonus

- Qualifiers:
 - CSA score of 10 or below
 - No Preventable accidents in quarter
 - Minimum Income requirement

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DataQs

- Have an owner
- Be proactive on entering Data Q's
- Track results

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Results

Lower CSA scores

MVA frequency reduction

MVA severity reduction

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Questions and Answers



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More Questions?



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Join us next time!

Fatigue Management:
Subtitle

August 27th – 10:00 AM Central



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