

The Safety Measurement System (SMS)
Methodology Enhancements and SMS
Preview
Fall 2016



# **Today's Presenters**



Monica Lanos
Transportation Specialist
FMCSA Office of Enforcement and Compliance



Dave Yessen
Transportation Specialist
FMCSA Office of Enforcement and Compliance



# **Today's Presentation**

- Review Compliance, Safety, Accountability (CSA) Safety Measurement System (SMS) and its improvement process
- 2. Outline primary objectives for the proposed SMS Methodology enhancements
- 3. Provide an overview of the proposed SMS Methodology enhancements
- 4. Outline the timeline for the SMS Preview
- 5. Frequently Asked Questions (FAQs)



# **CSA's Safety Measurement System (SMS)**

- Provides motor carriers and other safety stakeholders with more comprehensive, informative, and regularly updated safety performance data
  - Quantifies the on-road safety performance and considers prior investigation findings of motor carriers to prioritize enforcement resources
  - Helps determine the safety problems a motor carrier is exhibiting
  - Monitors motor carrier's safety problems for improvement or interventions



## **SMS Improvement Process**

- SMS is continually improved based on:
  - Availability of new data and additional analyses
  - Feedback from enforcement and other stakeholders, including industry



## **SMS Improvement Process, Cont.**

- The Federal Motor Carrier Safety Administration (FMCSA) applies a systematic approach to implementing improvements
  - Includes announcing the proposed changes in a Federal Register Notice and providing a preview and comment period
- FMCSA prioritizes and packages changes as needed
  - Includes public preview period prior to implementation of major changes



## Why an SMS Preview?

- Gives stakeholders an opportunity to <u>view and comment</u> on the proposed enhancements, verify data, and educate all stakeholders BEFORE the enhancements are implemented and become publicly available
- Enables FMCSA to make final refinements to the package of enhancements BEFORE public release



- 1. Make the SMS more effective at prioritizing carriers that pose the greatest safety risk for interventions
- 2. Improve FMCSA's focus on carriers with high crash rates and serious safety problems
- 3. Focus FMCSA's investigative resources on carriers with more crash involvement



# Objective: Make the SMS more effective at prioritizing carriers that pose the greatest safety risk for interventions

Enhancements that meet this objective:

- Expanding the range over which the Utilization Factor (UF) is applied
- Simplifying the data sufficiency standards to only assign
  Behavior Analysis and Safety Improvement Categories (BASIC)
  percentiles to companies that have had an inspection with a
  violation in the last year
- Segmenting the Hazardous Materials (HM) Compliance BASIC by cargo tank and non-cargo tank operations



# Objective: Improve FMCSA's focus on carriers with high crash rates and serious safety problems

## Enhancements that meet this objective:

- Adjusting the Intervention Thresholds for the Vehicle Maintenance, Controlled Substances/Alcohol, Driver Fitness and HM Compliance BASICs
- Moving operating while out-of-service (OOS) violations to the Unsafe Driving BASIC



# Objective: Improve FMCSA's focus on carriers with high crash rates and serious safety problems

#### **Current and Proposed Intervention Thresholds**

BASIC	Passenger Carrier	HM Carrier	General Carrier	Passenger Carrier	HM Carrier	General Carrier
Vehicle Maintenance	65%	75%	80%	60%	70%	75%
Controlled Substances/ Alcohol Driver Fitness HM Compliance	65%	75%	80%	75%	85%	90%



# Objective: Focus FMCSA's investigative resources on carriers with more crash involvement

Enhancements that meet this objective:

 Increasing the number of crashes required to assign a percentile in the Crash Indicator BASIC from two to three



# **SMS Preview Website**



## How to Access the SMS Preview Website

- Motor carriers and the public can access the SMS Preview Website by:
  - Clicking on the link on the CSA Homepage or
  - Visiting the SMS Preview Homepage <u>https://csa.fmcsa.dot.gov/SMSPreview</u>
- Carriers can also log in on the SMS Preview Homepage or via the CSA Outreach link in the Portal using their U.S. DOT Number and PIN
- Enforcement users can access the preview through the Portal or via the CSA Website Homepage



# **SMS Preview Website Features**





#### Get Road Smart. Road Smart.





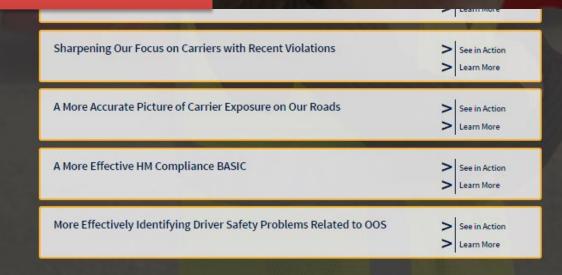
#### Welcome to the SMS Enhancements Public Preview!

At FMCSA, we know that strong, reliable data means smarter safety decisions and ultimately safer roads for everyone.

This is why we recently proposed enhancements to the SMS that put our latest analysis and your input to work to more effectively prioritize and intervene with carriers that post the greatest safety risk.

- > Watch this presentation for a primer on the proposed changes and the preview
- > Visit the Help Center to get your questions answered
- > Submit your comments on the Federal Register Notice







FMCSA proposes an enhancement to the Hazardous Materials (HM) Compliance Behavior Analysis and Safety Improvement Category (BASIC) to make it more effective at identifying carriers with HM compliance problems for interventions. This enhancement includes:

• Segmenting the HM Compliance BASIC by cargo tank and non-cargo tank operations

Adjusting this BASIC's Intervention Threshold

## 1 Tour this Change

See the proposed enhancement to the HM Compliance BASIC in action.
This tour uses an example carrier to walk you through the proposed change to the HM Compliance BASIC and show you how that change may impact SMS results. You can <u>Tour this Change</u>, return to the <u>SMS Preview Homepage</u> to tour another change, or explore each change on your own by hovering over the blue and red flags.

> Start Tour of this Change > Return to the Preview Homepage

I Compliance BASIC.

#### Wondering Why Parts of this Page Are Gray?

For your convenience, we grayed out information that will not be impacted by these proposed changes.

### 2 Need Help?

Get your questions about the proposed SMS enhancements and the preview answered in the <u>Help Center</u>. Once there, you can learn more about the proposed changes by reading the <u>Foundational Document</u> or the <u>Federal Register</u> <u>Notice</u>. You can also check out FAQs and other preview resources.

If you have additional questions, call our CSA InfoLine team at 1-877-254-5365, or fill out this form.

## 3 Submit Comments



A More E

Comment on this proposed change through the Federal Register Notice.



### Proposed Enhancement to the HM Compliance BASIC



FMCSA proposes an enhancement to the Hazardous Materials (HM) Compliance Behavior Analysis and Safety Improvement Category (BASIC) to make it more effective at identifying carriers with HM compliance problems for interventions. This enhancement includes:

#### Segmenting this BASIC by Cargo Tank and Non-Cargo Tank Operations

Cargo tank and non-cargo tank operations often result in different violations. Segmenting these carriers will enable the SMS to account for these differences when assigning percentiles in this BASIC.

#### Adjusting this BASIC's Intervention Threshold



We will adjust the Intervention Threshold for this BASIC from 80% to 90% to reflect its lower correlation to crash risk.

To learn more about how this proposed change will make this BASIC more effective, review the <u>Foundational Document</u>. You can also <u>Tour this Change</u> to see this proposed enhancement in action.







SMS

**SMS PREVIEW** 

HELP CENTER

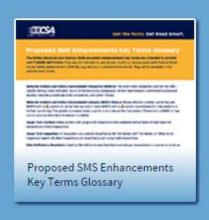
Select an Example Carrier

#### Help Center

Get your questions about the proposed SMS enhancements and the preview answered here. You can find preview resources or check out FAQs. Don't know where to start on the preview site? Click on Get Started to find out how to tour each proposed change and learn how to submit comments after your tour.



Learn what you need to know about the proposed SMS enhancements. Select a resource below that you can download, print, and share.











# **Proposed Enhancements**



# Improving FMCSA's Focus on Carriers with High Crash Rates by Adjusting Intervention Thresholds

**Proposed Enhancement** 



# Safety Rating & OOS Rates

#### Licensing and Insurance (As of 04/17/2016 updated hourly from L&I)

Type	Yes/No	MC#/MX#
Property	Yes	MC-HANN
Passenger		
Household Goods		
Broker	No	

#### et Road Smart.

#### **BASIC Status**

Behavior Analysis & Safety Improvement Categories (BASICs)

Based on a 24-month record ending March 25, 2016

How does SMS relate to crashes?





**TOUR THIS CHANGE** 



CARRIER MEASURE OVER TIME

**NEED HELP?** 









Select a BASIC icon above to get details.

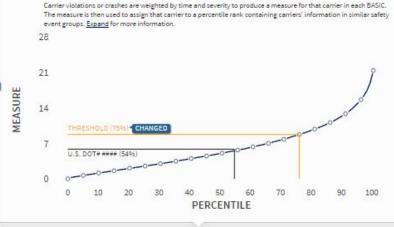
Denotes this carrier exceeds the FMCSA Intervention Threshold relative to its safety event grouping based upon roadside data and/or has been cited with one or more

#### Overview of Proposed Changes to Vehicle Maintenance BASIC

(Current and proposed SMS results are based on March 25, 2016 snapshot)

INTERVENTION THRESHOLD 75% PROPOSED 80% CURRENT





MEASURE VS. PERCENTILE



U.S. Department of Transportation **Federal Motor Carrier Safety Administratio** 

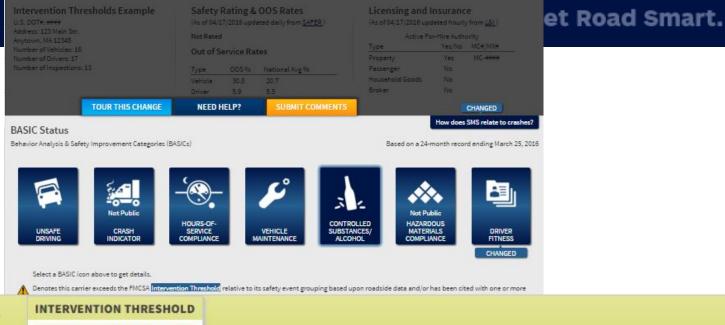
+ VIOLATION SUMMARY

+ INSPECTION HISTORY

Vehicle Maint, Violations: 20

INSPECTION RESULTS

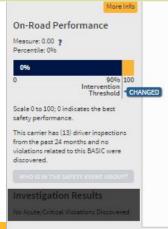




#### Overview of Proposed Changes to Controlled Substances/Alcohol BASIC

(Current and proposed SMS results are based on March 25, 2016 snapshot)





Carrier violations or crashes are weighted by time and severity to produce a measure for that carrier in each BASIC. The measure is then used to assign that carrier to a percentile rank containing carriers' information in similar safety event groups.

This carrier does not have a safety event group in this BASIC.



U.S. Department of Transportation
Federal Motor Carrier Safety Administration

+ VIOLATION SUMMARY
+ INSPECTION HISTORY

Drugs/Alcohol Violations: 0





Safety Rating & OOS Rates

00596 National Avg Po **NEED HELP?** 

#### Licensing and Insurance

Type	Yes/No	MC#/MX#
Property	Yes	MC-nama
Passenger		
Household Goods		
Broker	No	
		CHANCED

#### **BASIC Status**

Behavior Analysis & Safety Improvement Categories (BASICs)

How does SMS relate to crashes? Based on a 24-month record ending March 25, 2016





TOUR THIS CHANGE











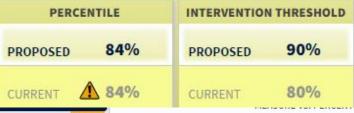
et Road Smart.

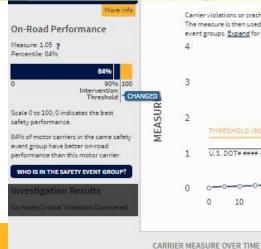
Select a BASIC icon above to get details.

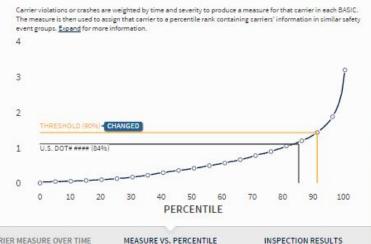
A Denotes this carrier exceeds the FMCSA Intervention Threshold relative to its safety event grouping based upon roadside data and/or has been cited with one or more

#### Overview of Proposed Changes to **Driver Fitness BASIC**

(Current and proposed SMS results are based on March 25, 2016 snapshot)







U.S. Department of Transportation Federal Motor Carrier Safety Administration

+ VIOLATION SUMMARY

+ INSPECTION HISTORY

Driver Fitness Violations: 6

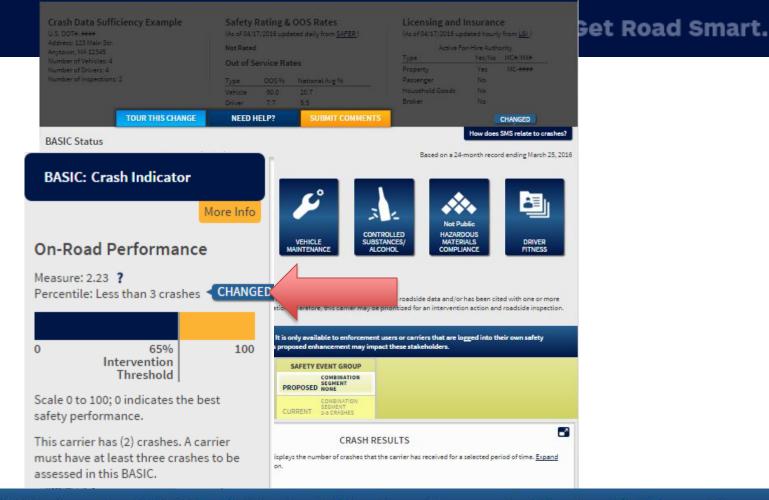
Driver Inspections: 13



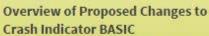
# Focusing FMCSA's Investigative Resources on Carriers with More Crash Involvement

**Proposed Enhancement** 

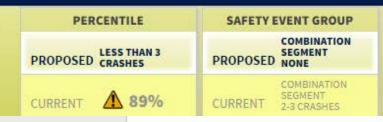




Note: The Crash Indicator BASIC is not currently available to the public. It is only available to enforcement users or carriers that are logged into their own safety profiles. The SMS Preview uses an example carrier to show you how this proposed enhancement may impact these stakeholders.



(Current and proposed SMS results are based on March 25, 2016 snapshot)



U.S. Department of Transportation
Federal Motor Carrier Safety Administrat

ZUIO



# Sharpening Our Focus on Carriers with Recent Violations

**Proposed Enhancement** 



#### Safety Rating & OOS Rates Licensing and Insurance Example J.S. DOTH: HAVE **TOUR THIS CHANGE NEED HELP?** CHANGED How does SMS relate to crashes? **BASIC Status** Behavior Analysis & Safety Improvement Categories (BASICs) Based on a 24-month record ending March 25, 2016 **BASIC: Vehicle Maintenance** More Info HAZARDOUS CONTROLLED VEHICLE SUBSTANCES/ MATERIALS DRIVER MAINTENANCE ALCOHOL COMPLIANCE On-Road Performance Measure: 8.60 ? roadside data and/or has been cited with one or more Percentile: No violations in the past year ized for an intervention action and roadside inspection. INT. RVENTION THRESHOLD 75% PROPOSED 75% 100 Intervention 80% CHANGED Threshold | • MEASURE VS. PERCENTILE Scale 0 to 100; 0 indicates the best crashes are weighted by time and severity to produce a measure for that carrier in each BASIC. safety performance. used to assign that carrier to a percentile rank containing carriers' information in similar safety d for more information. This carrier did not have any Vehicle Maintenance BASIC violations in the last year. WHO IS IN THE SAFETY EVENT GROUP? ME This carrier did not have any Vehicle Maintenance BASIC violations in the last - CHANGED WHO IS IN THE SAFETY EVENT GROUP? 70 90 100 PERCENTILE CARRIER MEASURE OVER TIME MEASURE VS. PERCENTILE INSPECTION RESULTS + VIOLATION SUMMARY Vehicle Maint, Violations: 10

Vehicle Inspections: 5

+ INSPECTION HISTORY



# A More Accurate Picture of Carrier Exposure

**Proposed Enhancement** 







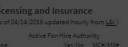
## A More Effective HM Compliance BASIC

**Proposed Enhancement** 









Type	Yes/No	MC#/MX#
Property	Yes	MC-MANA
Passenger		
Household Goods		
Broker	No	

How does SMS relate to crashes?

Based on a 24-month record ending March 25, 2016

Behavior Analysis & Safety Improvement Categories (BASICs)



+ INSPECTION HISTORY











HM Compliance Violations: 40 HM Placardable Vehicle Inspections: 267



**Get Road Smart.** 

Select a BASIC icon above to get details

Note: The HM Compliance BASIC is not currently available to the public. It is only available to enforcement users or carriers that are logged into their own safety profiles. The SMS Preview uses an example carrier to show you how this proposed enhancement may impact these stakeholders.

Overview of Proposed Changes to **Hazardous Materials Compliance** BASIC

(Current and proposed SMS results are based on March 25, 2016 snapshot)







# More Effectively Identifying Driver Safety Problems Related to OOS

**Proposed Enhancement** 



Operating While OOS Example
U.S. DOT#: ###
Address: \$123 Main 5tr.
Anytown, MA 12345
Number of Vehicles: 5
Number of Drivers: 5
Number of Inspections: 55

OS Example Safety Rating & OOS Rates

(As of 04/17/2016 updated daily from SAFER)

Not Rated

Out of Service Rates

Type OOS % National Avg %

Vehicle 20,0 20.7

Driver 9,7 5,5

TOUR THIS CHANGE NEED HELP? SUBMIT COMME

Licensing and Insurance
(As of 04, 17/2016 updated hourly from Like)

Active For-Hire Authority

Type

Yes/No MC+/MX+

Property

Yes MC-HH++

Passenger
No
Household Goods
No
Broker

No

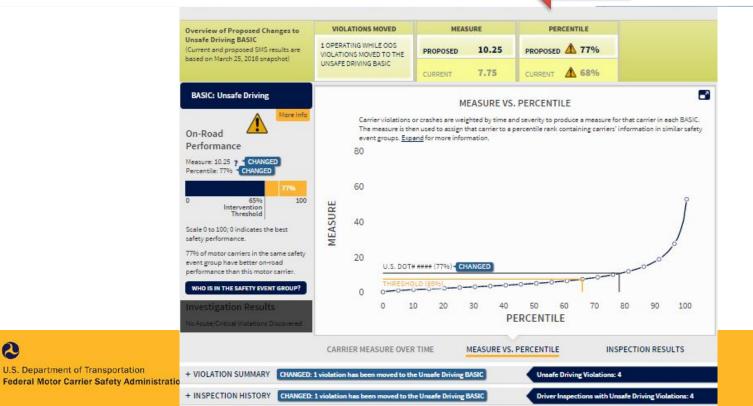
et Road Smart.

#### VIOLATION SUMMARY

CHANGED: 1 violation has been moved to the Unsafe Driving BASIC

Unsafe Driving Violations: 4

Violations	Description	# Violations	# OOS Violations	Violation Severity Weight
392.16	Failing to use seat belt while operating CMV	1	0	7
392.2-SLLS3	State/Local Laws - Speeding 11-14 miles per hour over the speed limit	1	0	7
392.2C	Failure to obey traffic control device	1	0	5
395.13(d)	Driving after being declared out-of-service MOVED from the HOS Compliance BASIC	1	1	10



Operating While OOS Example
U.S. DOT#: ####
Address: \$23 Main Str.
Anytown, MA 12345

Safety Rating & OOS Rates (As of 04/17/2016 updated daily from <u>SAFER</u> Licensing and Insurance (As of 04/17/2016 updated hourly from et Road Smart.

+ VIOLATION SUMMARY

CHANGED: 1 violation has been moved to the Unsafe Driving BASIC

Unsafe Driving Violations: 4

- INSPECTION HISTORY

CHANGED: 1 violation has been moved to the Unsafe Driving BASIC

Driver Inspections with Unsafe Driving Violations: 4

Report				Vehicle		Measure = Sum of the Total Weight (TotW)  Avg. PU × UF = 4		
Inspection Date	Number	State	Plate Number	Plate State	Туре	Severity Weight (SW)	Time Weight (TiW)	Total Weight (TotW)
7/25/2015	XX555555555	XX	888888	XX	Truck Tractor	5	2	10
Violation: 392,2C F	Failure to obey traffic contr	rol device				5		
5/2/2015	88888888XX	XX	888888	XX	Truck Tractor	7	2	14
Violation: 392.2-SL	LLS3 State/Local Laws - Sp	peeding 11-14 mile	s per hour over the speed	limit	4	7		
3/24/2015	XX444444444	XX	000000	XX	Tr	10	1	10
Violation: 395.13(d	d) Driving after being decla	ared out-of-service	(OOS) MOVED from the	e HOS Compliance BA	ASIC	10		
4/3/2014	XX222222222	XX	222222	XX	Truck Tractor	7	1	7
Violation: 392.16 F	Failing to use seat belt whil	le operating CMV				7		
					Sum of measure weights	29	6	41
DEDCODMANCE	F MEASURE LAST	TotW 51		PEDEODI	MANCE MEASURE THIS	TotW	41	

PERFORMANCE MEASURE LAST MONTH As of 2/26/2016

$$\frac{\text{TotW}}{\text{Avg. PU} \times \text{UF}} = \frac{51}{4} = 12.75$$

MORE INFO

PERFORMANCE MEASURE THIS MONTH As of 3/25/2016

$$\frac{\text{TotW}}{\text{Avg. PU} \times \text{UF}} = \frac{41}{\underline{4}} = 10.25$$

\*\*\* The sum of all violation severity weights (violation weight + out-of-service) for this inspection has been capped at 30.





U.S. Department of Transportation









#### What's Next: SMS Preview Timeline

- October 2016 (Public Preview)
  - 60-day comment period with the publication of the Federal Register Notice
- Following Preview
  - Participate in online question and answer (Q&A) sessions for industry
    - Submit questions at: <u>https://csa.fmcsa.dot.gov/CSA\_feedback.aspx?defaulttag=SMSPREVIEWQA</u>
- Implementation
  - Enhancements to the SMS Methodology will be implemented following the completion of the Correlation Study required by Section 5221 of the FAST Act



## Frequently Asked Questions (FAQs)



### Where can I review presentation materials?

To review the information presented in today's video presentation, download the following resources from the Help Center on the SMS Preview Website at <a href="https://csa.fmcsa.dot.gov/SMSPreview/HelpCenter/Index.aspx">https://csa.fmcsa.dot.gov/SMSPreview/HelpCenter/Index.aspx</a>:

- Video
- Presentation
- Transcript



## Why did FMCSA propose these changes to the SMS Methodology?

FMCSA is committed to continually improving the SMS methodology in response to new data, analyses, and stakeholder feedback to make our roads safer for everyone.

#### These enhancements allow FMCSA to:

- More effectively prioritize those motor carriers that pose the greatest safety risk for interventions
- Focus our investigative resources on carriers with more crash involvement
- Sharpen our focus on carriers with high crash rates
- More accurately account for the carriers that are driving on our roads the most
- More effectively identify driver safety problems and HM compliance problems



# Where can I get more detailed information about the proposed enhancements?

 For more detailed information about the proposed enhancements, you may review the SMS Enhancements Foundational Document in the Help Center on the SMS Preview Website:

https://csa.fmcsa.dot.gov/SMSPreview/HelpCenter/Index.aspx

 You may also review the Federal Register Notice and submit your comments: <a href="https://www.federalregister.gov/">https://www.federalregister.gov/</a>

**Federal Motor Carrier Safety Administration** 



# What should motor carriers and the public do during the preview of the proposed SMS methodology enhancements?

During the SMS Preview, motor carriers and the public should:

- 1. Submit comments on the proposed SMS enhancements via the Federal Docket Website at: <a href="https://www.federalregister.gov">https://www.federalregister.gov</a>
- 2. Try out the "Tour This Change" feature, which provides detailed information on each of the proposed enhancements
- 3. Visit the Help Center to download preview resources, browse FAQs, and learn how to get started on the preview site



### Can a motor carrier still see all of its SMS data?

 Yes. To view their current SMS data, motor carriers may still log in through the SMS Website: <a href="http://ai.fmcsa.dot.gov/sms">http://ai.fmcsa.dot.gov/sms</a>

 To view how their data would be affected by these proposed enhancements, motor carriers may log in on the SMS Preview Homepage:

https://csa.fmcsa.dot.gov/SMSPreview



#### **SMS Preview Website: Additional Resources**

- Visit the SMS Preview Help Center at <a href="https://csa.fmcsa.dot.gov/SMSPreview/HelpCenter/Index.aspx">https://csa.fmcsa.dot.gov/SMSPreview/HelpCenter/Index.aspx</a>
  - Searchable FAQs
  - Key Terms Glossary for user-friendly definitions
  - Foundational Document
- Review the Federal Register Notice for more information on the proposed enhancements
- Contact our CSA InfoLine Team at 1-877-254-5365 or online at <a href="http://csa.fmcsa.dot.gov/CSA\_Feedback.aspx">http://csa.fmcsa.dot.gov/CSA\_Feedback.aspx</a>



## Help Us Build A Nationwide Commitment to Safety

- Educate carriers and drivers
  - Understand the SMS and the BASICs
  - Sign up for important updates via the CSA Website at: <a href="http://csa.fmcsa.dot.gov/subscription.aspx">http://csa.fmcsa.dot.gov/subscription.aspx</a>



### Help Us Build A Nationwide Commitment to Safety, Cont.

- Ensure compliance and check and update records
  - Monitor and review all inspection and crash data, and address safety problems immediately at <a href="http://ai.fmcsa.dot.gov/SMS/Default.aspx">http://ai.fmcsa.dot.gov/SMS/Default.aspx</a>
  - Question potentially incorrect data
     (DataQs: <a href="https://dataqs.fmcsa.dot.gov">https://dataqs.fmcsa.dot.gov</a>)
  - Update your MCS-150 form and VMT data





The Safety Measurement System (SMS)
Methodology Enhancements and SMS
Preview
Fall 2016