



## TRB Truck and Bus Safety - Carrier Safety Management Subcommittee

Marquis Salon 14 (M2), Marriott Marquis

Monday, January 10<sup>th</sup>, 2022, 8:00-9:30 a.m. ET

### Meeting Minutes

#### 1) Welcome and introductions

##### Attendees –

Brenda Lantz	Brenda.Lantz@ndsu.edu
Bob Scopatz	Bscopatz@vhb.com
Matt Camden	Mcamden@vtti.vt.edu
Zach Cahalan	Zcahalan@trucksafety.org
Jonathan Mueller	Jon.mueller@dot.gov
Andrew Miller	Amiller6@vt.edu
Dan Murray	Dmurray@trucking.org
Mohamed Ahmed	mahmed@uwyo.edu
Steve Vaughn	Svaughn9534@yahoo.com

#### 2) Presentations (10-15 minutes each)

##### a) *Effective Strategies to Improve Safety, Case Studies of Commercial Motor Carrier Safety Advancement*

- i) Matt Camden, Senior Research Associate & Team Leader for Research to Practice & Outreach, Division of Freight, Transit, & Heavy Vehicle Safety, Virginia Tech Transportation Institute
- ii) Examined nine (9) companies that had significantly improved safety. They were identified through insurers, state trucking associations, and FMCSA BASIC scores.
  - (1) Confirmed improvements with the carriers.
  - (2) Carriers had a range of sizes (from larger than 1000 power units to as small as 20).
  - (3) Key takeaways include –
    - (a) safety culture (driver focused);
    - (b) safety technologies (a large variety);
    - (c) being proactive (pre-crash, at-scene, and post-crash lessons-learned); and
    - (d) a comprehensive approach to safety is needed.
    - (e) A common theme was hiring. Carriers expressed the view that they would rather a vehicle sit idle than be out on the road with an unsafe driver behind the wheel.

##### b) *Industry Recommended Practices for Improving Safety Culture and Utilizing Monitoring Technologies in the Oil and Gas Industry*

- i) Andrew Miller, Senior Research Associate, Division of Freight, Transit and Heavy Vehicle Safety, Virginia Tech Transportation Institute
- ii) Oil and gas worker fatality rate is more than six (6) times that of US workers in general.

- (1) Vehicle-related incidents account for 40% of that. Small carriers and subcontracts make up a significant proportion of those incidents. These carriers typically do not have driver training programs or other established safety programs due to their size or function.
  - (2) The hope is to apply best practices from large fleets to these small fleets typical of oil and gas industry.
    - (a) Best practices consist of preventative and reactive actions that can be taken using in-vehicle monitoring systems as well as other programs.
    - (b) Establishing accountability for drivers on leading indicators of crash risk provides the most insight into driver actions and the best means to change driver behaviors.
    - (c) Creating a safety culture climate from the top to the bottom emphasizes the role of safety for drivers while also providing drivers with additional channels of communication to encourage safe driving behaviors.
  - iii) Installed MiniDAS camera systems in five (5) pilot vehicles to test data acquisition methodology and to classify hours spent on road by commuting, traveling between sites, and personal driving. The analysis established working days (almost 14 hour-average workdays), and measured driver behaviors.
  - iv) The next steps include validation of industry-recommended practices and expansion of the pilot to gather more data.
- c) *Overview of Recent Carrier Safety Management Research from the American Transportation Research Institute (ATRI)*
- i) Dan Murray, Senior Vice President for ATRI
  - ii) 2021 Top Industry Issues survey has interesting juxtapositions of driver issues and carrier issues.
  - iii) Younger Driver Assessment Tool looking to find the potential super-safe drivers among the new drivers.
    - (1) They are about to expand from initial 96 super-safe drivers and now going to expand to 300 young drivers (under 25 years old).
  - iv) Tech-Celerate Advanced Driver Assistance Systems.
    - (1) Looked at Carrier issues. Carriers ranked driver acceptance as their #3 issue.
    - (2) There are a lot of misperceptions among drivers about the technology—things are changing. There are still a lot of carriers with no technology, but there are many positive changes.
  - v) Insurance costs are going up rapidly (Double-digit increases annually). It is a commonly-cited reason for bankruptcy. Large carriers are more insulated than smaller carriers.
    - (1) New report to be released in Q1 2022.
  - vi) COVID Impacts assessments are ongoing. Average trip length has changed, and that has changed safety picture.
  - vii) Owner-operator and Independent Contractors. This was started because of the push in California to reclassify OO/IC drivers.
  - viii) The issue of driver-facing cameras. Research is underway.
  - ix) Other work: Deaf & Hard of hearing drivers and future inspection scenarios for automated trucks.

- d) *Update on the FMCSA Beyond Compliance Research Effort*
    - i) Brenda Lantz, Associate Director, Upper Great Plains Transportation Institute, North Dakota State University
    - ii) FAST Act required FMCSA to allow recognition for carriers that installed advanced safety equipment, used advanced driver fitness measures, and adopted fleet safety management tools, technologies, and programs.
    - iii) The literature review was completed circa 2020. Not many empirical studies showing crash reductions related to technologies.
      - (1) Few studies on motorcoaches.
      - (2) Video-based monitoring improves safety.
      - (3) Safety culture is a major factor among the safest carriers.
      - (4) Hiring safe drivers and training them is a common theme.
  
  - e) *The National Road Safety Partnership Program (NRSP) Establishment of the Construction Logistics and Community Safety in Australia (CLOCS-Initiative)*
    - i) Jerome Carlsake, Director, NRSP
    - ii) Abstract and pre-recorded presentation available at [www.ugpti.org/trb/truckandbus/meetings/2022/materials.php](http://www.ugpti.org/trb/truckandbus/meetings/2022/materials.php)
  
  - f) *System Thinking Tool for Light and Heavy Motor Vehicles*
    - i) Sharon Newnam, Associate Professor and Associate Director, Systems Safety Team, Monash University, Accident Research Centre
    - ii) Report and pre-recorded presentation available at [www.ugpti.org/trb/truckandbus/meetings/2022/materials.php](http://www.ugpti.org/trb/truckandbus/meetings/2022/materials.php)
- 3) Review of Research Needs Statements and discussion of future research needs
- a) RNS: Women Commercial Drivers & Safety.
    - i) Examine the safety and operational performance of women commercial drivers with the potential outcome of increasing their numbers.
  - b) RNS: Improved Safety Management for Prime Contractor & Subcontract Carriers.
    - i) Analyze and document safety challenges which might exist in large transport operations making extensive use of subcontract carriers and drivers.
    - ii) Identify and articulate effective safety management practices for such organizations, both from the perspective of “parent” companies and their small subcontractors.
  - c) RNS: Carrier Based Validation of Driver Selection Tools.
    - i) Conduct carrier-based validation studies of various tests and measurements used for driver selection and other assessments to improve driver selection.
  - d) Validation of Driver Analytic Modeling.
    - i) As part of the above project or separately, validate analytic modeling of driver safety and retention to prevent spurious inferences due to Type I errors (false positives generated randomly by multiple post hoc comparisons), regression to the mean, and similar pitfalls.
  - e) Improving Carrier Risk Management Practices.



- i) Identify means for motor carriers to identify and understand their crash risks and available countermeasures in areas beyond regulatory compliance.
  - f) Crash Investigation and Analysis for Carriers.
    - i) Identify and delineate effective carrier practices to investigate and analyze their crashes, considering carriers' multiple needs to learn from their mistakes, reduce future risks, avoid undue liability and adverse publicity, and treat crash-involved drivers fairly.
  - g) Media for Communications with Small Carriers and Drivers.
    - i) Determine the best media and formats for messages regarding safety information, including new regulations, enforcement, best practices, and time-critical (e.g., traffic, weather, safety recalls) information.
  - h) Ecodriving Pilot Tests and Program Development in North America.
    - i) Ecodriving is a primarily European initiative that promotes fuel economy and lower-risk driving.
    - ii) There is a need for demonstration pilot tests and other activities to develop and promote the concept in North American fleets.
- Jon Mueller said that the new Transportation Authorization has tasked FMCSA to research ways to encourage more participation in trucking by women.
  - Driver Selection Tools...some work from ATRI and by Matt Camden is relevant.
  - Improving Carrier Risk Management Practices—Sharon's work, Andrew's work, and Matt's work.
  - Crash Investigation and Analysis for Carriers—the new Crash Causation Study should address this. \$30 M. NOTE: add mention of actual reductions in crashes, injuries, and fatalities.
  - Media for Communications for Small Carriers and Drivers—There's a TikTok for drivers!
  - Ecodriving Pilot Tests. When you are trying to be more fuel efficient those strategies may make you safer. The research could demonstrate that.
  - Alternative Compliance item is retired.