



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



Only 65% of Truck Drivers Wear Safety Belts as Compared to 82% of Car Drivers



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Transcore is a proud sponsor of FMCSA driver safety messages on DAT Load Monitors in truck stops nationwide. 2006 FMCSA



2006

CMV Driver Fatality Stats

- ▶ **805 drivers and occupants of large trucks died in truck crashes**
- ▶ **393 of these were not wearing safety belts.**
- ▶ **Of the 217 drivers and occupants who were killed and ejected from their vehicles, approximately 81% were not wearing safety belts.**

Commercial Motor Vehicle Safety Belt Partnership

Goal:

**To increase safety
belt use by drivers
of large trucks.**



***Partnership Established
December 9, 2003***



**COMMERCIAL
MOTOR VEHICLE
SAFETY BELT
PARTNERSHIP**

**JOINING TOGETHER
FOR SAFETY**



Commercial Motor Vehicle Safety Belt Partnership

**American Association of Motor Vehicle Administrators
American Society of Safety Engineers
American Trucking Associations
Commercial Vehicle Safety Alliance
Commercial Vehicle Training Association
Federal Motor Carrier Safety Administration
Great West Casualty Company
International Association of Chiefs of Police
Motor Freight Carriers Association
National Association of Publicly Funded Truck Driving Schools
NATSO
National Highway Traffic Safety Administration
National Private Truck Council
National Safety Council
National Tank Truck Carriers
Network of Employers for Highway Safety
Owner-Operator Independent Drivers Association
Property Casualty Insurers Association of America
National Truckload Carriers, Professional Truck Drivers Institute
Truck Manufacturers Association**



CMV Safety Belt Partnership Objectives

- ▶ **Maintain and Expand CMV Safety Belt Partnership**
- ▶ **Conduct Research and Analysis of Problem**
- ▶ **Educate and Enforce**
 - ▶ **Develop and Disseminate Educational Materials**
 - ▶ **Increase Enforcement**
- ▶ **Evaluate Program Effectiveness**



RESEARCH AND ANALYSIS

- ▶ **TRB Synthesis Report on Commercial Motor Vehicle Driver Safety Belt Use, 2005**
- ▶ **NOPUS: National Occupant Protection Usage Study (NHTSA), 2007**
- ▶ **Technology Countermeasures Study, 2008**



Transportation Research Board CMV Safety Belt Study

- ▶ **Literature Review**
- ▶ **Two Surveys**
 - **Safety Managers (120)**

 - **Drivers (238)**
 - **Structured interviews**
 - **Two focus groups**
- ▶ **Ergonomics and Human Factors Review**
- ▶ **Recommendations**



TRB STUDY

Safety Manager Survey Results

Major Reasons Why Safety Belts Might Not Be Used

- ▶ Too much trouble and effort
- ▶ Just forget
- ▶ Habit
- ▶ Belt fits poorly
- ▶ Uncomfortable
- ▶ Restricts movement
- ▶ Infringes on personal freedom
- ▶ Worried about being trapped
- ▶ Don't believe belts enhance safety
- ▶ Don't like them
- ▶ Use only part-time (e.g., bad weather)



TRB STUDY

Safety Manager Survey Results

Top Three Approaches Safety Managers Use

- ▶ **Rewards/recognition for observed use**
- ▶ **Observing use in vehicles**
- ▶ **Punishments/reprimands for non-use**
 - ▶ **There were other methods identified, and indications that fleet managers use multiple approaches.**
- ▶ **Highest rated government program method was showing crash dummies.**



TRB STUDY

Driver Survey Results

Choices to wear belts relate to

- ▶ **Safety**
- ▶ **Because it's the law**
- ▶ **It's a habit**
- ▶ **Past crash observance**

Reasons why belt not worn

- ▶ **Comfort**
- ▶ **Personal choice**
- ▶ **Dislike**



TRB STUDY

Driver Survey Results

Comfort Factors Include

- ▶ Limited range of arm and shoulder motion
- ▶ Belt too short, or too tight
- ▶ Shoulder harness position is awkward
- ▶ Belts ride too high or too low

Many Drivers (62%) Had Complaints About Safety Belts

- ▶ Belt rubs or vibrates against neck/shoulder
- ▶ Belt locks
- ▶ Belt too tight or uncomfortable
- ▶ Belt has limited range of motion



TRB STUDY

Driver Survey Results

Reasons Safety Belts Easy to Use

- ▶ **Does not fit too tight**
- ▶ **Does not interfere with driving**
- ▶ **Easy to put on and take off**
- ▶ **Easy to position**

Carrier/Fleet Interactions

- ▶ **Most respondents to this question indicated no penalty for non-use, and no special incentives to encourage use.**



TRB STUDY

Ergonomics and Human Factors Issues

Assessment based on original equipment manufacturers visits and observations of 3-point belts:

- ▶ **Majority of belts are practical and functional**
- ▶ **Newer belts even more user-friendly**
- ▶ **Many drivers not fully aware of comfort and easy-to-use features**
- ▶ **Need to focus on small- and large-stature driver situations**



TRB STUDY

Ergonomics and Human Factors Issues

- ▶ **Generally, the positive values of belt use are understood and appreciated by CMV drivers.**
- ▶ **Where top management is committed to driver use, and encourage and provide rewards, usage rates are high.**
- ▶ **The belts generally available have features that can make belt use comfortable and convenient for drivers.**
- ▶ **Safety belt manufacturers and OEMs are taking steps to further improve convenience and comfort.**¹⁶



TRB STUDY

Ergonomics and Human Factors Issues

- ▶ **Many drivers have a cultural or factual misperception about risks of non-use.**
- ▶ **Fleet managers do not employ proactive and comprehensive approaches to driver use.**
- ▶ **Some operational situations (multi-stop, short distance and delivery environments) encourage drivers to give in to perceived inconvenience.**
- ▶ **Large- and small-statured drivers experience discomfort.**
- ▶ **Many drivers unaware of comfort and convenience features.**
- ▶ **Not all fleets insist on most advanced belts in trucks.**



TRB STUDY

Recommendations

- ▶ **FMCSA should continue its plan to use the education and enforcement model established by NHTSA as an effective method to increase safety belt use.**

- ▶ **There is an overall need for extensive education and technology development efforts to –**
 - ▶ **Increase driver understanding of values of 100% use, and risks of non-use.**

 - ▶ **Strongly encourage fleet managers to commit to a comprehensive program to promote safety belt use.**



TRB STUDY

Recommendations Continued

- ▶ **Accelerate installation of full-featured safety belts in all fleet vehicles.**
- ▶ **Focus on eliminating small- and large-stature driver issues.**



Technology Countermeasures Study, 2008

- ▶ Identify and evaluate technological approaches to improve safety belt use for commercial motor vehicle drivers (Class 4-8 Trucks)
- ▶ Identify demographics of CMV safety belt non-users to target countermeasures using US DOT crash data
- ▶ Learn about types and characteristics of crashes where CMV drivers were killed



Technology Countermeasures Study, 2008 - Conclusions

- ▶ Current safety standards for large trucks (FMVSS 208) do not require safety belt reminder systems of any kind.
- ▶ Increasing safety belt use by CMV drivers to the rates of passenger vehicle usage (from 59% to 81% in 2006) would significantly reduce fatalities and serious injuries.
- ▶ 74 CMV driver fatalities would be prevented if safety belt usage rates rose to the level observed for passenger vehicle drivers
- ▶ 860-1,340 moderate to seriously injured CMV drivers could have sustained injuries less severe if they were restrained



Technology Countermeasures Study, 2008 - Conclusions

- ▶ Two promising technologies were identified that are acceptable to stakeholders, cost effective and likely to improve safety belt wearing rates
 - ▶ Enhanced Audible Reminder Systems
 - ▶ Brightly colored safety belts

- ▶ In addition, two additional technologies have been identified which show promise and are acceptable to stakeholders
 - ▶ Komfort Latch System
 - ▶ Seat Integrated Restraints



EDUCATION AND OUTREACH



Driver Breakfast

Mid-America Trucking Show, Louisville, KY

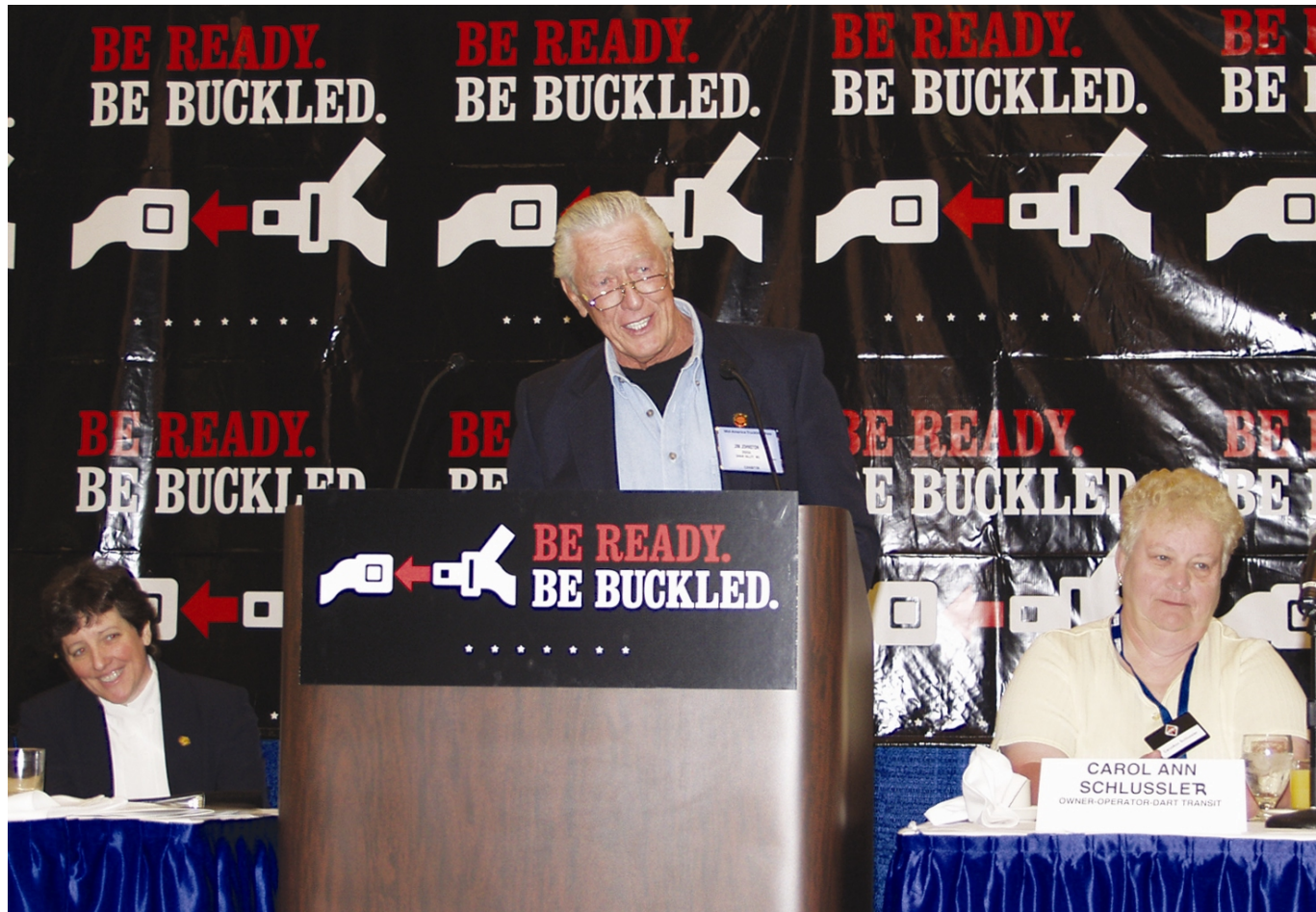
April 1, 2005



Driver Breakfast

Mid-America Trucking Show, Louisville, KY

April 1, 2005



Driver Breakfast

Mid-America Trucking Show, Louisville, KY

April 1, 2005



April 1, 2005, Driver Breakfast

▶ U.S. Department of Transportation Secretary Norman Y. Mineta announced BE READY. BE BUCKLED. campaign

▶ Message to Drivers -

BE READY. BE BUCKLED. speaks to the unpredictability of what one may encounter on the road, encouraging truck drivers to drive defensively and buckle up because they can't control the other drivers on the road.

It encourages truck drivers to buckle up in order to stay in control of their vehicle and reduce injuries, ejection and death.



Education and Outreach

- ▶ **TransCore load monitoring systems, in truck stops throughout the country, continue to carry safety belt messages every hour.**
- ▶ **Increasing Safety Belt Use in Your Company.**
How to manual
PowerPoint Training Slides
- ▶ **Sirius Satellite Radio and XM Satellite Radio**



Education and Outreach

Safety Belt Public Service Announcement with Rusty Wallace, Racing Legend



Audio PSAs



15 seconds



30 seconds



60 seconds

Video PSAs

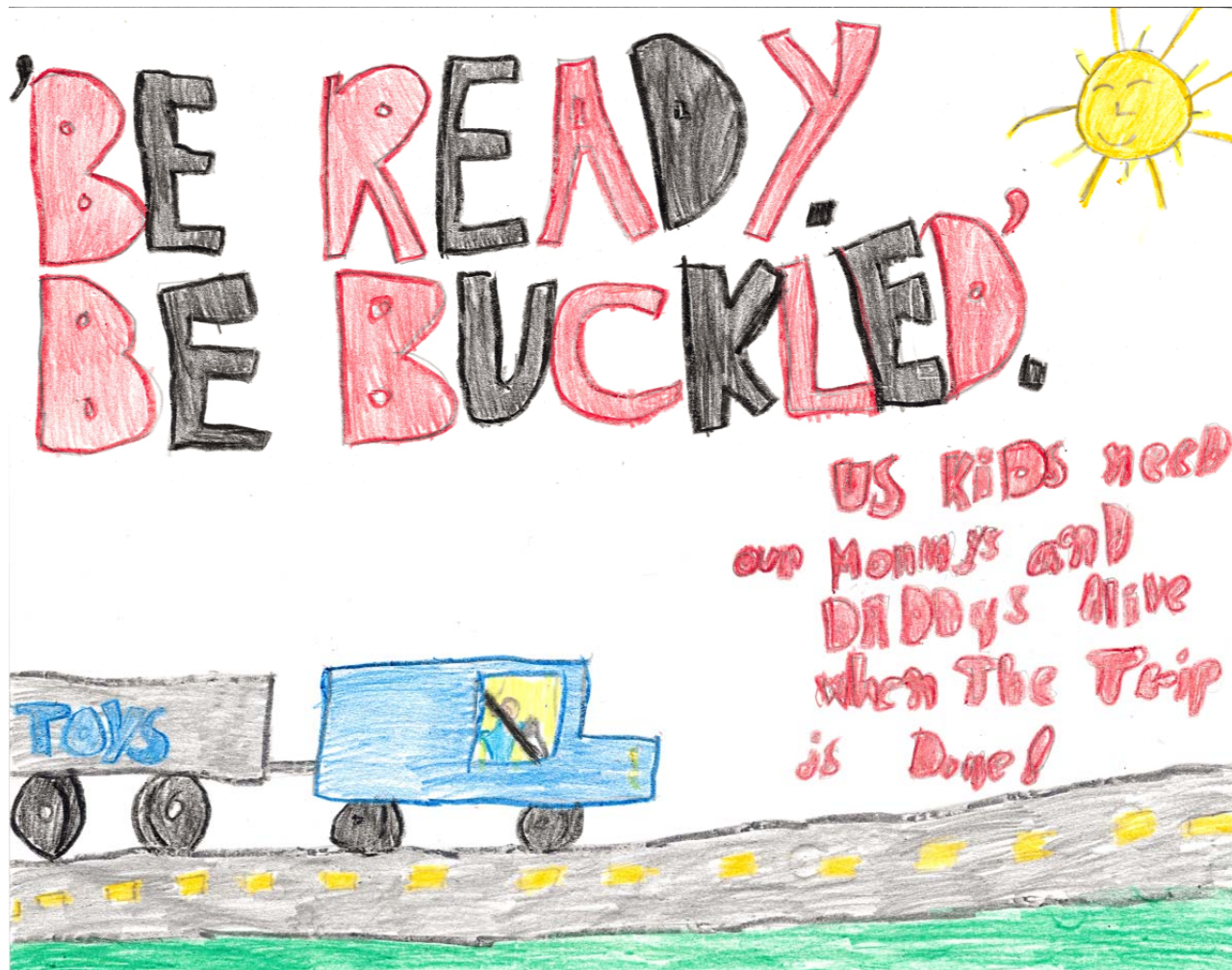
15 seconds

30 seconds

Education and Outreach

2008 *Be Ready.
Be Buckled.*
Kids Poster
Contest

Winning Poster
Sara O'Dell
Oklahoma



Education and Outreach

- Saved By the Belt Campaign
- CVSA recognizes drivers who buckled up and whose lives were saved or injuries significantly reduced as a result of wearing a safety belt.





- ▶ **Education/Outreach Material**
 - All brochures
 - BE READY. BE BUCKLED.* outreach material
 - Brochures, Poster, Bumper Sticker
- ▶ **Increasing Safety Belt Use in Your Company Manual**
- ▶ **Public Service Announcements**
- ▶ **Frequently Asked Questions**
- ▶ **Speeches/Presentations**
- ▶ **Events**
- ▶ **CMV Safety Belt Related Studies**



FACTS

- ▶ In 2006, 703 drivers of large trucks died in truck crashes and 314 of those drivers were not wearing safety belts. Of the 188 drivers killed who were ejected from their vehicles, almost 80% were not wearing safety belts.
- ▶ In 2006, 805 drivers and occupants of large trucks died in truck crashes and 393 of these were not wearing safety belts. Of the 217 drivers and occupants who were killed and ejected from their vehicles, approximately 81% were not wearing safety belts.
- ▶ Federal Motor Carrier Safety Regulations require commercial motor vehicle drivers to wear safety belts. (49 CFR 392.16)



FACTS

- ▶ **51% of truck-occupant fatalities in large trucks involve a rollover. Rollover in a large truck increases the likelihood of fatality by 30 times. In a rollover, a truck driver is 80% less likely to die when wearing a safety belt.**
- ▶ **About 23,000 large-truck occupants suffered nonfatal injuries in crashes; of these, 4,000 were seriously injured.**
- ▶ **73% of truck drivers killed, who were not wearing a safety belt, were involved in single vehicle crashes.**

