

Research Results



Safety and Health Impacts of the New Hours-of-Service Rules

The Problem

First instituted in 1939, the original commercial driver Hours-of-Service (HOS) rules continued for nearly 60 years with few revisions. Recently, the body of research on sleep patterns, driver fatigue, and safety analyses led to a major HOS program overhaul. The Federal Motor Carrier Safety Administration (FMCSA) revised the rules in 2003, and the new rules became effective in early 2004. This summary refers to these rules as the 2004 rules.



The 2004 HOS rules redefined the on-duty and rest periods for commercial truck drivers to more closely resemble the 24-hour circadian schedule – including a requirement for a longer daily off-duty period, a reduced daily tour-of-duty, one extra hour of daily driving time, and a “restart” provision permitting drivers to zero out their weekly cumulative hours after 34 continuous hours off-duty. In response to the court decision in 2004, FMCSA and the trucking industry began working to determine the impact of the 2004 HOS rules on driver health, safety, and carrier productivity.

Research Goal

The goal of this research was to provide objective empirical data relevant to the effects of the 2004 HOS

rules. The study was designed to examine the perceptions of those most directly affected by the new rules and whether the changes were accompanied by improved health and safety outcomes. The study contrasted 2003 information with 2004 to provide a comparison of safety performance under the old rules with that of the 2004 rules.

Methodology

The principal analysis in the study aggregated collision and driver injury data from 23 fleets representing approximately 100,000 commercial drivers and 10 billion annual vehicle miles of travel (VMT). Safety statistics for 2003 (under the old HOS rules) were compared to those for 2004 (under the 2004 HOS rules) to identify significant changes in outcomes. In addition to operational statistics, the following key metrics were obtained:

Key Metrics from Fleets	
Number of Drivers	Fuel Tax Miles
DOT-Reportable Collisions	Preventable Collisions
Driver Injuries	Collision-Related Driver Injuries

The second set of analyses focused on the experiences of drivers and other key industry stakeholders. Three focus groups involving long-haul fleet safety managers and other industry experts were held to gather data relative to the productivity and safety impacts of the 2004 HOS rules. A confidential driver survey involving three fleets and 996 drivers examined the self-reported impacts of the 2004 HOS rules on driving practices and fatigue.

Quantitative Analysis Findings

The participating fleet data was aggregated and analyzed to determine if the changes in safety and health metrics between 2003 and 2004 were significant.

The analysis of the fleet data indicates that there were significant decreases in the collision rate per million VMT (-3.7%), preventable collision rate (-4.8%), and non-preventable collision rate (-0.8%). Even larger reductions were observed in the driver injury rate (-12.6%), collision-related injury rate (-7.6%), and non-collision injury rate (-13.7%) per million VMT. These aggregated fleet statistics indicate clearly that 2004 was a safer year than 2003 for participating fleets, especially in terms of preventable collisions and commercial driver injuries.



Qualitative Analysis Findings

While there was diversity among the responses, generally, drivers and safety directors are satisfied with the changes in the HOS rules.

Drivers who participated in the survey had a range of experiences under the new rules; however, there were some consistencies among a majority of the responses:

- Most of the drivers indicated the new rules had a positive or neutral impact on their driving patterns.
- A plurality of drivers indicated the new rules either had no impact or made a positive impact on driving.
- Drivers indicated generally less fatigue or experiencing no change in fatigue after the new rules.
- The 34-hour restart, 10 hours off, and 11 hours of driving time are the most preferred features of the new rules.

Focus groups of safety directors and other industry stakeholders revealed similar results. While there were different viewpoints presented at each meeting, below are some of the general themes that were identified:

- Drivers are more rested and relaxed under the new rules.
- Drivers are better able to schedule their time, at home and at work.
- Drivers like and use the 11 hours driving and the 34-hour restart.
- Adjustments in business practices resulting from the new rule (such as increased detention fees) have improved operational efficiency.
- The 14-hour limitation to drivers' daily tours of duty creates operational constraints and discourages drivers from taking rest breaks.

Conclusions

The findings – both qualitative and quantitative – paint a generally favorable picture of the safety and health impacts of the 2004 HOS rules.

The aggregated fleet crash and injury statistics for the 23 participating fleets were the most cogent data in support of the 2004 HOS rules. There were significant decreases in each of the key metrics. The findings from these aggregated fleet statistics track other long-term truck safety trends.

The focus group and driver survey responses were consistent in nature. While a variety of views were stated in both, overall the managers and drivers support the new rules.

This current analysis provides a model and baseline for continued “within-subjects” monitoring of industry safety performance under the 2004 HOS rules.

Next Steps

In August 2005, FMCSA issued another change to the HOS rules which became effective in October 2005. This latest rule change primarily addressed a driver's ability to split sleeper berth time. Under the previous rules, drivers could split sleeper berth time into two segments, as long as no segment was less than 2 hours. With the 2005 rule change, drivers must now take one 8-hour consecutive period in the sleeper berth.

In order to assess the safety impacts of this latest HOS rules change, ATRI is seeking carriers willing to provide on-going data to track driver safety performance under the new 8-hour sleeper berth requirement. If you are interested in participating in this study or would like additional information about this research please contact ATRI at: atri@trucking.org.

For more information about this and other ATRI studies, please visit: WWW.ATRI-ONLINE.ORG



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