



Commercial Motor Vehicle (CMV) Driver Restart Study, 2015

Information Briefing December 23, 2014



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Office of Research and Information Technology

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Briefing Objective

To inform participants on:

- The congressional mandate for the Federal Motor Carrier Safety Administration (FMCSA) to conduct the Commercial Motor Vehicle (CMV) Driver Restart Study; and
- The Agency's research design and implementation plan.

Briefing Agenda

- Background
- Study Overview
- Data to be Collected
- Potential Data Collection
- Recruitment and Reimbursement
- Participation Requirements
- Carrier/Driver Recruitment

Background

- The Consolidated and Further Continuing Appropriations Act of 2015 directed FMCSA to conduct a CMV Driver Restart Study.
- The study will measure and compare the fatigue and safety performance levels of drivers who take 2 nighttime rest periods during their 34-hour restart break and those drivers who take less than 2 nighttime rest periods during their restart break.
- FMCSA is working hard to meet the tight deadlines required to complete the study. In doing so, we are looking for assistance in identifying carriers that would support their drivers' participation in the study.

Study Overview

CMV Driver Restart Study

- Compare 5-month driver work schedules to assess safety-critical events (SCEs), operator fatigue, and driver health, using:
 - Electronic Logging Devices (ELDs);
 - Psychomotor Vigilance Tests (PVTs) (which measure alertness);
 - Actigraph watches (which assess sleep), and;
 - OnBoard Monitoring Systems (OBMS).
- Study will include a sample of drivers comprised of fleets of all sizes (i.e., small, medium, and large) and operations (including long-haul, regional and short-haul) in various sectors of the industry (including flat-bed, refrigerated, tank, and dry-van).
- Participants will drive their normal revenue-producing routes while data will be collected to measure safety performance and recovery duration.

Data to be Collected

Driving Behavior: OBMS to monitor driving behavior that might be indicative of fatigue, for example SCEs, and (if available) shifting patterns, speed variability, curve events, and lane departures.

Psychomotor Vigilance Test (PVT): PVT measures reaction times to stimuli.

Actigraph Watch: Collect actigraphy data wirelessly on sleep/wake patterns, heart rate, respiration rate, and physical activity.

Electronic Driver Logbooks: Drivers' logs collected with the primary purpose of tracking driver operating schedules.

Karolinska Sleepiness Scale (KSS): The KSS is a 9-point subjective sleepiness scale that has been shown to provide a good estimate of sleepiness.

Roadside Violations: Collect data on driver roadside violations.

Crashes and Incidents: Data on crashes and other incidents would be collected and would include time of day, severity, and type of crash.

Driver Survey: Identify driver opinions regarding 34-hour restart and how the study was conducted.



Scope of Data Collection

CMV Driver Restart Study has the potential to be the largest naturalistic driving field study ever conducted, involving 200–300 CMV drivers.

We could collect as many as:

- 5,760 driver restarts
- 403,200 hours of OBMS data
- 967,680 hours of actigraph watch data
- 20,160,000 miles of ELD data
- 120,960 PVTs.

Recruitment and Reimbursement

- FMCSA and the research team will be recruiting drivers and carriers for study participation.
- Drivers will be reimbursed based on their time commitment.
- Carriers may be reimbursed for any lost revenue due to the study and for the cost of installing the above-listed data collection equipment on their trucks.
- A potential benefit for carriers who choose to participate is the opportunity to access and evaluate new safety technologies that may not have already been procured.

Participation Requirements

- Much of the data will be collected automatically without driver intervention:
 - Electronic Logging Data on driver schedules;
 - Safety Performance Data through an OBMS (Lytx [formally Drivecam] or SmartDrive systems);
 - Actigraph Watch Data (collected via a smartphone—with phone calling features disabled).
- Each day, drivers will be required to complete one or more 3-minute PVTs (on a smartphone).
- Every driver may be required to enter sleep/wake logs, record caffeine use, and report subjective sleepiness during the study.
- At the end of the study, drivers will be asked to complete a survey about their experience.
- The study team will monitor driver compliance on a daily basis.

Carrier/Driver Recruitment

- FMCSA is seeking drivers who routinely:
 - Drive and work approximately 60 to 70 hours per week.
 - Drive during night-time hours.
- FMCSA is seeking a list of carriers that would support and actively recruit their drivers' to participate in this study.

Information Sources

- Web page dedicated to the study will be created on the FMCSA website. The web page will include information on the study and regular status updates.
- E-mail mailbox dedicated to the study will be available for submitting inquiries and for carriers and drivers to express interest in participation: Driver_Restart_Study@dot.gov

Thank You

Contact Information

Study Requirements

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