



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

Overview of FMCSA Pilot Programs

Flexible Sleeper Berth and Military Under-21 Studies

Nicole Michel, Mathematical Statistician, Research Division

2018 Transportation Research Board 97th Annual Meeting
Federal Motor Carrier Safety Administration
Analysis, Research, and Technology Forum
January 9, 2018



+

+

Office of Research and Information Technology



What is a Pilot Program?

- A study providing temporary regulatory relief from one or more FMCSA Regulations (FMCSRs) to collect specific data to evaluate regulatory alternatives or innovative safety approaches.¹
 - Useful when FMCSA determines there may be an effective alternative to the current requirements in one or more FMCSRs but current research is not sufficient for a notice of proposed rulemaking.
- The number of participants must be large enough to ensure statistically valid findings.²
- An oversight plan must be included to ensure participants comply with the terms and conditions of participation and procedures to protect the health and safety of study participants as well as the general public.³

1. 49 CFR 381.400(a)

2. 49 CFR 381.400(d)

3. 49 CFR 381.400(e)



FLEXIBLE SLEEPER BERTH PILOT PROGRAM

Background

- Recent research indicates that the total amount of sleep in a 24-hour period is more important than accumulating sleep in just one period for mitigating fatigue.¹
- FMCSA-sponsored laboratory studies have also shown benefits from splitting sleep.²
- Drivers have requested more flexibility in the 14-hour on-duty clock.

1. Jackson, M.L., Banks, S., Belenky, G. “Investigation of the effectiveness of a split sleep schedule in sustaining sleep and maintaining performance.” *Chronobiology International* 31(10): 1218–1230, 2014.
2. Belenky, G., Jackson, M.L., Tompkins, L., Satterfield, B., Bender, A.: *Investigation of the Effects of Split Sleep Schedules on Commercial Vehicle Driver Safety and Health*, U.S. Department of Transportation, Federal Motor Carrier Safety Administration, 2012.

Project Timeline

Milestones

- Conduct Peer Review of Study Design
- Publish Federal Register Notice proposing the pilot program
- Send Information Collection Request (ICR) to the Office of Management and Budget (OMB) for review and approval
- Conduct 5-driver pre-test
- Begin Pilot Program
- Conclude Data Collection
- Final Report

Date

- Completed – 08/22/16
- Completed – 06/06/17
- In Progress – 11/27/17
- Anticipated – Early 2018
- Anticipated – Spring/Summer 2018
- Anticipated – Spring/Summer 2019
- Anticipated – Summer/Fall 2019

Pilot Program Design

- Up to 240 Participants:
 - 50 drivers each from large, medium, and small carriers.
 - 25 owner-operators and 25 team drivers.
 - Must regularly use their sleeper berth and regularly operate the same vehicle with gross vehicle weight rating (GVWR) > 10,000 lbs.
 - Must have carrier agreement to participate.
- 60 drivers will participate at a time for up to 90 days:
 - Five 90-day cycles necessary, one additional may be used for attrition.

Data Collection Design

- SmartDrive Commercial Onboard Monitoring System:
 - Video recording of safety critical events and baseline events.
- Actigraph Watch:
 - While being worn continuously collects data on whether a participant is awake or sleeping.
- Smartphone with Pre-loaded Apps:
 - Psychomotor Vigilance Test: measures reaction time.
 - Subjective sleepiness rating, sleep log, caffeine log, and subjective quality of sleep rating.



Record of Duty Status Rule Set

- Drivers may split their sleep into 2 periods, each period must be greater than 2 hours.
 - Current hours-of-service (HOS) rule set allows drivers to take 8 hours consolidated sleeper berth time and the additional 2 hours may be taken as off-duty *or* in sleeper berth time.
- Neither sleeper berth period will count towards the 14-hour on-duty clock.
- Drivers must have 10 hours of consolidated sleep (or 8 hours consolidated sleep followed by an additional 2 hours off-duty or in the sleeper berth) to go back to the current HOS rule set.

Next Steps

- SmartPhone app suite currently under development.
- 5-driver pre-test planned for early 2018:
 - Ensure data collection instrumentations work.
 - Evaluate analysis methodology.
- Information Collection Request currently with OMB for review and approval.
- Pilot Program expected to begin once OMB approval is received.



MILITARY UNDER-21 PILOT PROGRAM

Background

- This study is mandated by Section 5404 of the Fixing America's Surface Transportation Act, 2015 (FAST Act).¹
- Collect and analyze data regarding “covered drivers” and drivers under the age of 21 operating a commercial motor vehicle (CMV) in intrastate commerce:
 - A “covered driver” is an individual between the ages of 18 and 21 who is a member (or former member) of the armed forces or reserve components and is qualified in a Military Occupational Specialty to operate a CMV or similar vehicle.
 - Participating drivers may not transport passengers, hazardous cargo, or operate a vehicle in special configuration.
- Establish a working group to review the data collected and provide recommendations on the feasibility, benefits, and safety impacts of allowing a covered driver to operate a CMV in interstate commerce.
- Submit a report to Congress not later than 1 year after the conclusion of the Pilot Program.

1. Fixing America's Surface Transportation Act, 2015, Section 5404 (Pub. L. 114-94, 129 Stat. 1312, 1549, Dec. 4, 2015).

Project Timeline

Milestones

- Publish Federal Register Notice proposing the pilot program
- Conduct Peer Review of Study Design
- Publish 60-day Federal Register Notice of proposed Information Collection
- Send Information Collection Request to OMB for review and approval
- Begin Pilot Program

Date

Completed – 09/22/16

Completed – 11/03/17

Anticipated – Spring 2018

Anticipated – Summer 2018

Anticipated – Early 2019

Comparison of FMCSA & Military Training Requirements

- **FMCSA Entry-Level Driver Training Requirements:**
 - Requires classroom and behind-the-wheel training.
 - Topic Areas: Basic Operation, Safe Operating Procedures, Advanced Operating Procedures, Vehicle Systems and Reporting Malfunctions, and Non-driving Activities.
- **Military Occupational Specialty Codes and Training:**
 - Army: 88M; 32 hours of classroom training and 189 hours practical training.
 - US Air Force: 2T1; 22 hours of classroom training and 62 hours hands-on activities.
 - US Marine Corps: Heavy-duty Vehicle course; 24 hours lecture, 35 hours demonstration, 198 hours road driving.
 - US Navy: Heavy Vehicle Operator course; 30 hours classroom, 130 hours behind-the-wheel.

Program Design

- Three Group Design:
 - 200 Covered Drivers – as defined by the FAST Act.
 - 200 Under-21 Intrastate CMV drivers.
 - 200 Entry-level CMV drivers between the ages of 21 and 24 (control group).
- Collect data for approximately 36 months; produce 18-month interim report.
 - Option to end program early if data is conclusive at interim point.
 - Pilot program regulations limit the length of a pilot program to 3 years.¹
- Carriers will submit data on a monthly basis to the research team.

1. 49 CFR 381.400(b)

Data Collection Design

- Each participating driver must sign an informed consent form and provide relevant background information.
 - Age, gender, driving experience, military history (if applicable).
- On a monthly basis, carriers will submit information for each driver on:
 - Vehicle miles traveled.
 - Total number of inspections and violations.
 - Total number of crashes.
- Carriers must inform FMCSA within 24 hours if any of the following occur:
 - A driver chooses to leave the program or leaves the carrier.
 - A driver is involved in a crash with an injury or fatality.

Next Steps

- Currently finalizing Pilot Program design.
- Federal Register Notices to be published by Spring 2018:
 - 60-day notice of proposed information collection.
 - Notice of pilot program details, to include responses to comments received on the Pilot Program proposal (81 FR 56750).
- Pilot Program to begin once OMB approval is received.

Contact Information

Nicole Michel

Mathematical Statistician

Research Division

Federal Motor Carrier Safety Administration

U.S. Department of Transportation

E-mail: nicole.michel@dot.gov