Of the people killed in motor vehicle crashes in 2008, 11 percent (4,229) died in crashes that involved a large truck. Another 90,000 people were injured in crashes involving large trucks. About 16 percent of those killed and 26 percent of those injured in large truck crashes were occupants of large trucks.

In direct support of this mission, the Onboard Monitoring System (OBMS) for Commercial Motor Vehicle (CMV) safety research program is being conducted by the Federal Motor Carrier Safety Administration (FMCSA). The objective of the OBMS program is to determine whether onboard monitoring will reduce at-risk behavior among CMV drivers and improve driver safety performance. The at-risk CMV drivers for this study will be defined by the number of safety-critical events observed with the OBMS that are in the upper third quartile (or at the greatest risk when compared to other drivers in the study). Specifically, the project will determine if recording and reporting of safety-critical events, followed by coaching drivers (by safety managers) using these safety events as feedback, will enhance safe driving behavior.

Operator monitoring and feedback can be characterized as a behavior-based safety method. Safe behavior is rewarded and unsafe behavior is coached, thereby proactively improving overall safety. The OBMS to be used in this study will record (through snippets of video and other performance/kinematic measures) unsafe driving behaviors and provide a real-times
feedback to drivers. Recorded driver problems (e.g., hard braking maneuvers) are then transmitted to, and reviewed by, the driver’s fleet safety manager. Depending on the judgment of the fleet safety manager, the recorded incident can then be shown to the driver in a coaching session with the goal of pinpointing the problematic behavior and providing instruction about how to avoid that problem in the future. Corrected action and improved behavior is expected as a result of the coaching session, which involves drivers viewing their recorded errors alongside their safety manager, receiving feedback as to the nature of the problematic behavior, and being instructed about the appropriate behavior to be demonstrated in the future.

Conceptually, the prospect of improving driver behavior and reducing safety-critical events fits well with FMCSA’s mission. Hypothetically, successful implementation of the OBMS program may significantly reduce the number and severity of crashes involving CMVs.

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