

# Domain of Truck & Bus Safety Research: Enforcement and Compliance

**Committee on Truck & Bus Safety (A3B15)**

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# Introduction

- ◆ Enforcement and compliance monitoring shared by:
  - Federal Motor Carrier Safety Administration (FMCSA)
  - State commercial vehicle enforcement agencies (Motor Carrier Safety Assistance Program - MCSAP)
  - Commercial Vehicle Safety Alliance
  - State and local traffic enforcement agencies
  - State driver licensing agencies
  - Others
- ◆ Enforcement may be directed at carriers, commercial vehicle drivers, and passenger vehicles

# Key enforcement programs

- ◆ Federal/state motor carrier safety compliance reviews
- ◆ Roadside inspections of commercial drivers and vehicles
- ◆ Commercial Driver Licenses (CDLs)
- ◆ Vehicle size and weight enforcement
- ◆ Hazardous materials transportation
- ◆ New entrant motor carrier program
- ◆ Commercial vehicle and passenger vehicle traffic enforcement
- ◆ Alcohol and drug testing

# Trends in commercial vehicle enforcement

- ◆ Targeting problem carriers and drivers and high-crash locations, times, etc.
- ◆ Data-driven enforcement and compliance programs
- ◆ Building databases to support enforcement and compliance activities and analysis and research
- ◆ Increased use of technology in enforcement and compliance efforts
- ◆ Non-governmental third-party audit programs
- ◆ Increased attention on new drivers and carriers
- ◆ Emphasis on security

# Recent technologies

- ◆ PrePass-type systems - qualifying carriers bypass weigh stations, port-of-entry facilities, agricultural facilities
- ◆ Electronic citation systems at roadside inspections, traffic stops, etc.
- ◆ Electronic on-board recorders (EOBRs) monitor drivers' driving, on-duty, and off-duty time
- ◆ On-board GPS systems
- ◆ Driver license technologies
- ◆ Automated brake performance testers

# FMCSA database/information/analysis systems

- ◆ Centralized systems access via the Internet or FMCSA Intranet
- ◆ Distributed systems with desktop or laptop applications
- ◆ Data provided by states, FMCSA, carriers, and others

# Selected database/information/analysis systems

- ◆ SafeStat – system that provides relative safety status and other information on motor carriers
- ◆ MCMIS (Motor Carrier Management Information System) – warehouse and information system with data on inspections, crashes, compliance reviews, safety audits, vehicle registrations
- ◆ PRISM (Performance & Registration Information Systems Management) – links federal carrier safety records with state vehicle registration systems
- ◆ CDLIS clearinghouse (Commercial Driver's License Information System) and National Driver Register (NDR) – used to retrieve license status/conviction history from state driver history records

# Selected database/information/analysis systems

- ◆ CVISN (Commercial Vehicle Information Systems and Networks) – collection of information systems and networks to support commercial vehicle operations
- ◆ SAFER (Safety and Fitness Electronic Records) – website displaying carrier information available to public
- ◆ ISS (Inspection Selection System) – used at roadside inspections to retrieve carrier performance indicators as tool to determine usefulness of conducting an inspection
- ◆ SAFETYNET – database management client-server system of data from driver/vehicle inspections, crashes, compliance reviews, assignments and complaints
- ◆ State traffic records systems

# Selected research and evaluation issues

- ◆ Use of electronic on-board recorders (EOBRs) or other automated systems to monitor compliance with hours-of-service rules
  - Types of systems in use
  - Extent used in lieu of paper logbooks
  - Effects on carrier operations and enforcement of hours-of-service regulations
  - Report on GPS Pilot with Werner Enterprises
  - European experience
  - Ability of drivers and roadside inspectors to enter, read, interpret data from EOBRs

# Selected research and evaluation issues

## ◆ Roadside inspections

- Documenting state practices (e.g., selection procedures, station types and locations, interstate vs. intrastate vehicles)
- Relating state differences to measures of productivity, violation/out-of-service rates, commercial vehicle crashes
- Violation and out-of-service rates for representative national sample of vehicles and drivers vs. actual targeted approaches; rates by carrier type, intrastate vs. interstate, time of day
- Inter-inspector reliability
- Improving detection of hours-of-service violations using logbooks and other documents

# Selected research and evaluation issues

- ◆ Incorporating additional driver-specific data in SafeStat (carrier safety rating system) and ISS (inspection selection system)
- ◆ Effects of new hours-of-service rules on work and rest schedules, carrier operations, and enforcement
- ◆ Association between commercial drivers' history of traffic and inspection violations and crashes
- ◆ Electronic brake performance systems
  - Cost-effectiveness of use at border crossings and weigh stations
  - Barriers to implementation
  - Effects on violations/out-of-service rates for maladjusted brakes

# Selected research and evaluation issues

- ◆ Implications of Pre-Pass-type technologies for security, hours-of-service compliance, examining speed, etc.
- ◆ Testing driver license technologies
- ◆ Compliance with drug and alcohol rules
- ◆ Safety effects of entry of Mexican trucks
- ◆ Enforcement of seat belt use at roadside inspections
- ◆ Police and court practices regarding traffic citations issued to commercial drivers

# Selected research and evaluation issues

- ◆ Effects of new carrier entrant program
- ◆ Training and Licensing issues
  - Effects of experience vs. age on crash and citation rates
  - Types of crashes involving new drivers
  - Training requirements for obtaining CDL
  - Training requirements for drivers of longer combination vehicles (LCV)

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