



NTSB National Transportation Safety Board

Enhancing Commercial Vehicle Safety: Challenges and Opportunities

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Board Member

Commercial Vehicle Safety Alliance
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Enhancing Commercial Vehicle Safety: Challenges and Opportunities

- Driver fatigue/sleep apnea
- Electronic on-board recorders
- Motorcoach accidents/safety issues

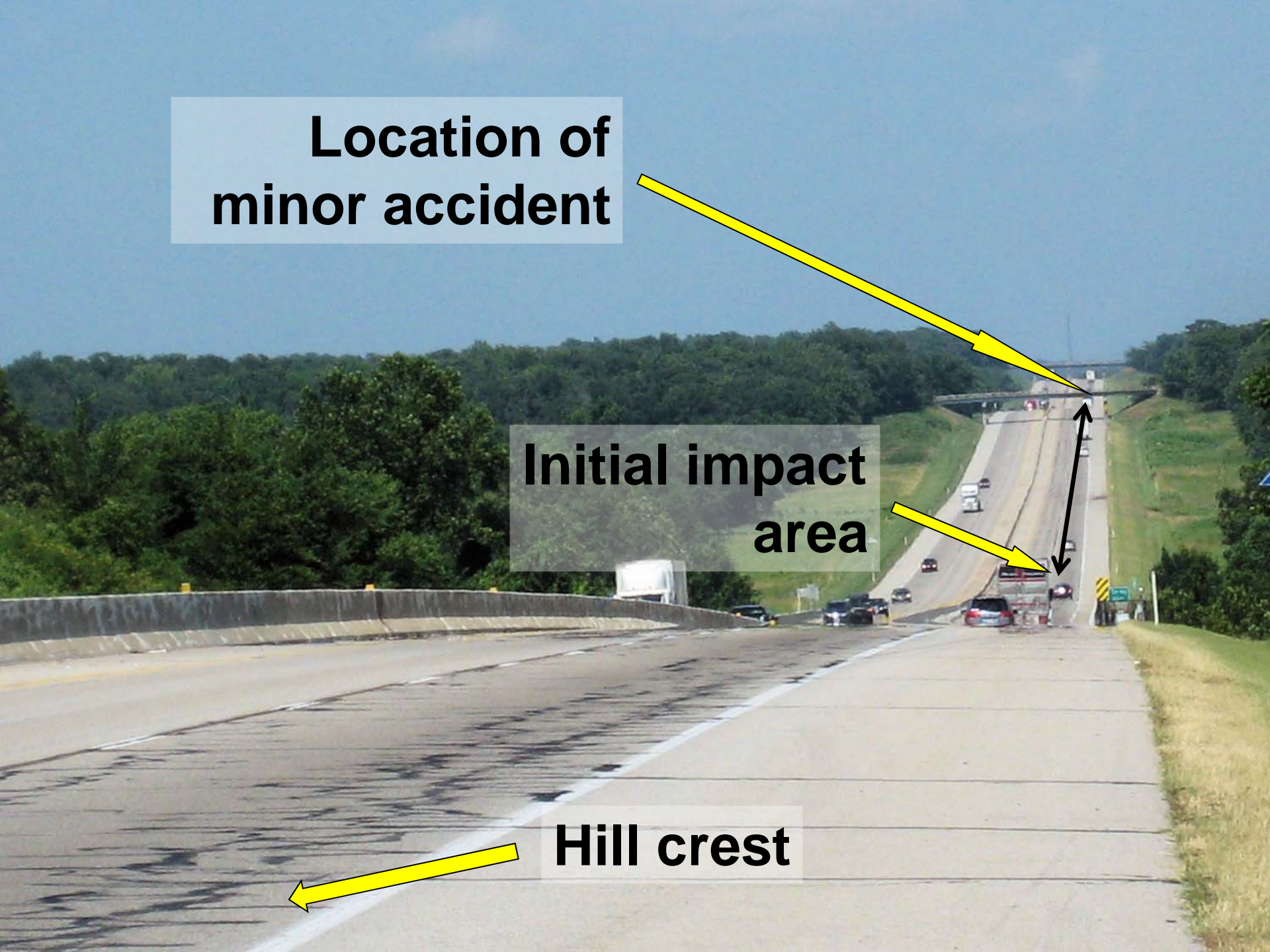
Miami, Oklahoma (June 26, 2009)

- Initial minor accident (~1:13 pm)
 - blocked eastbound I-44
- 2008 Volvo truck-tractor (~1:19 pm)
 - refrigerated semitrailer
 - traveling eastbound on I-44
 - 69 mph with cruise control engaged
 - without slowing or braking collided into queue of slowing & stopped vehicles

**Location of
minor accident**

**Initial impact
area**

Hill crest



10 fatalities
3 serious injuries
2 minor injuries
5 no injuries

**Ford
Windstar**



**Hyundai
Sonata**

**Kia
Spectra**

Fatigue Factors

- Off work for 3 weeks
- Kept day active/night sleep schedule when off
- Had one work day prior to accident
- 3am to 3pm shift work/drive schedule (since 1997)
- Obtained min 3 hrs/max 5 hrs sleep prior to accident
- Early bedtime (2 hr phase advance in sleep time)
- Subsequently diagnosed with mild sleep apnea

Probable Cause (fatigue)

“ . . . driver’s fatigue, caused by the combined effects of acute sleep loss, circadian disruption associated with his shift work schedule, and mild sleep apnea, which resulted in the driver’s failure to react to slowing and stopped traffic ahead by applying the brakes or performing any evasive maneuver to avoid colliding with the traffic queue. . . . ”

Healthy Sleep

Mexican Hat, UT, January 6, 2008



- 360 rollover, 50/53 ejected, 9 fatalities, OSA (-CPAP)

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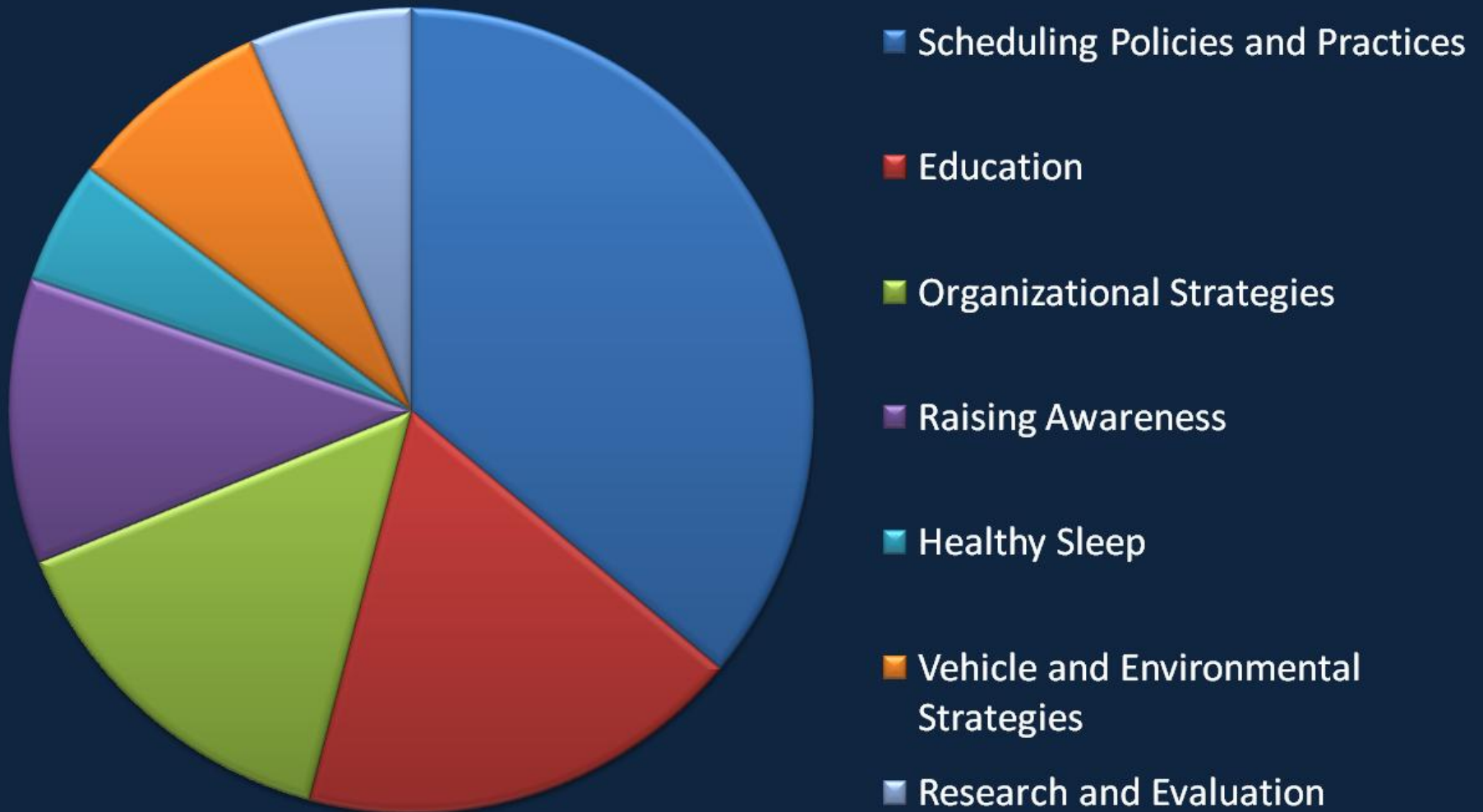
NTSB Fatigue Investigations/Studies

- 30 highway accident investigations
- 2 Safety Studies
 - Fatigue, Alcohol, Other Drugs and Medical Factors in Fatal-To-The Driver Heavy Truck Crashes (31% fatigue; > drugs and alcohol)
 - Factors that Affect Fatigue in Heavy Truck Accidents (last sleep duration, total sleep in 24 hrs, split sleep)

NTSB Recommendations

- MOST WANTED since 1990
- 190+ fatigue recommendations
- 60+ in highway

Highway Fatigue Recommendations



Education

- Education vs. awareness
- Foundation for any fatigue efforts
- Address broad/applied content:
 - how fatigue affects performance
 - how to minimize fatigue risks
 - countermeasures to combat fatigue
 - policies to support tired drivers

Healthy Sleep Recommendations

- Develop standard medical exam to screen for sleep disorders; require its use
- Educate companies and individuals about sleep disorder detection and treatment, and the sedating effects of certain drugs
- Disseminate guidance for identifying/treating obstructive sleep apnea
- Ensure drivers with apnea are effectively treated before granting unrestricted medical certification
- Have a written contingency plan to accommodate drivers impaired by fatigue or illness

Response to Recommendations

- Response (2/1/2010)
 - 2008 MRB recommendation (screening for BMI>30)
 - Rulemaking considered for sleep disorders
 - Medical Examiner Handbook info (May 2010)
 - Meeting on OSA in commercial drivers (May 2010)
 - Revised exam form (estimated September 2010)
 - Best Practices Guide (for examiners, companies)

Fatigue Management Programs

- Comprehensive approach
- Multiple components
- Science based
- Continuously evaluated and updated
- Complements HOS regulations

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- **Electronic on-board recorders**
- Motorcoach accidents/safety issues

Electronic On-Board Recorders



Electronic On-Board Recorders

- New proposed FMCSA rule:
 - To document hours of service
 - For motor carriers required to maintain RODS [records of duty status]
 - Will apply to what % of drivers subject to HOS regulations?

Electronic On-Board Recorders

- NTSB Comments:
 - recommend it be applied to all or most drivers subject to HOS requirements
 - consider setting standards for EOBR damage resistance and data survivability for post accident investigations

Enhancing Commercial Vehicle Safety: Challenges and Opportunities

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- **Motorcoach accidents/safety issues**

March 12, 2011 in Bronx, NY

- ~5:37 am returning to NYC from CT
- Departed the travel lanes to the right, crossed over a paved shoulder, and struck a roadside barrier
- Bus then traveled nearly 500 feet while rolling over until colliding with a 9-inch diameter highway signpost
- Impact drove the pole through the bus's windshield, severing the roof panel from the body for nearly the length of the bus
- 15 fatalities



Courtesy of media.fresnobee.com



Courtesy of CNN



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March 14, 2011 in New Jersey

- Scheduled run from New York City to Philadelphia
- Departed the roadway and struck a concrete headwall of the New Jersey Turnpike exit ramp
- Bus re-entered and crossed the roadway and came to rest after striking an embankment
- Driver and one passenger were killed 44 injured

East Brunswick, NJ



Courtesy of (CBSNewYork/AP)

NTSB



East Brunswick, NJ



AP Photo/Julio Cortez



March 22, 2011 near Littleton, NH

- Traveling on I-93 from Quebec to Boston
- Driver reportedly lost control and departed the roadway to the left
- Bus went down an embankment and rolled onto its left side
- All 25 occupants were injured

Littleton, NH



Courtesy: Kayti Burt / Littleton Courier



Safety Oversight

- Motorcoach operations transport 750 million passengers/yr (800 million passengers in commercial aviation)
- Motorcoach one of the safest modes, averaging less than 20 fatalities per year (vs. about 70 in aviation)
- Combined total of 166 open NTSB safety recommendations issued to DOT, NHTSA, FMCSA, FHWA, PHMSA
- 100 NTSB recommendations relate to motorcoach safety

Motorcoach Safety Action Plan

U.S. Department of Transportation Motorcoach Safety Action Plan



Actions needed by States

HIGHWAY

Improve Child Occupant Protection

- Enact state laws requiring booster seats for young children up to age 8.

Enact Primary Seat Belt Enforcement Laws

- Increase number of people who wear seat belts through stronger enforcement laws that don't restrict officers to observing another offense first.

Eliminate Distractions for Young Drivers

- Prohibit use of interactive wireless communications devices by young novice drivers.
- Restrict the number of teen passengers traveling with young novice drivers.
- Enact graduated driver licensing legislation.

Eliminate Hard Core Drinking Driving

- Enact legislation to reduce crashes involving repeat offenders who drink large amounts of alcohol, including:
 - Frequent, statewide sobriety checkpoints.
 - More effective measures (sanctions/treatment) for first time arrests with high blood alcohol concentration and repeat offenders.
 - Zero blood alcohol requirement for those already convicted of driving while intoxicated.
 - Administrative license revocation for refusing to take or failing an evidential test for alcohol.
 - Vehicle sanctions for DWI offenders to separate drinking from driving.
- Elimination of plea-bargaining DWI offenses and programs that divert offenders and purge offense records.
- DWI offense records retention for at least 10 years to identify repeat offenders.
- Special sanction court-based programs such as DWI courts for hard core DWI offenders.

Improve Motorcycle Safety

- Require that all persons shall wear a Department of Transportation Federal Motor Vehicle Safety Standard 218-compliant motorcycle helmet while riding (operating), or as a passenger on, any motorcycle.



National Transportation Safety Board

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November 2010



NTSB MOST WANTED LIST

Transportation Safety Improvements

2010 - 2011

*Critical changes needed to reduce
transportation accidents and save lives.*

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NTSB Most Wanted List

- Enhance protection for motorcoach passengers
- Prevent collisions by using enhanced vehicle safety technology
- Improve the safety of motor carrier operations
- Require electronic onboard data recorders to maintain accurate carrier records on driver Hours of Service
- Prohibit cell phone use by motorcoach drivers
- Prevent medically unqualified drivers from operating commercial vehicles

TRUCK & BUS

S A F E T Y

A Decade of Progress



NTSB Safety Forum May 10-11, 2011

- Carrier Oversight and Operations
- CDL Licensing
- Driver safety and health
- Vehicle technology
- Crash mitigation

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Challenges and Opportunities

- Acknowledge/address challenges
- Pursue all opportunities to enhance safety
- Shared responsibility = collaboration
- Our collaboration can achieve:
 - increased knowledge of CMV operations and regulations
 - increased safety of the motoring public around CMVs
 - effective CMV enforcement
 - reduced CMV fatalities, personal injury crashes, and incidents

Never Enough Recognition . . .

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