NTSB Recommendations and Fatigue Countermeasures

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NTSB Investigating Human Fatigue Factors
September 30, 2014
Go! Flight 1002

- early starts, multiple segment days, sleep apnea
Honorable John K. Lauber:

No Accident ≠ Safe Operation
Challenges of a 24/7 Society
Fatigue Risks

- awake/alert
- asleep
- reduced performance
- variability
Alertness Reports Often Inaccurate

Subjective alertness

Physiological alertness

Adapted from Sasaki et al., 1986
NTSB Safety Recommendations: Fatigue

• 40 years ago: May 10, 1972

• “Revise FAR 135 to provide adequate flight and duty time limitations.” (A-72-55)

• Classified “Closed-Unacceptable”
A program to increase the public's awareness of, and support for, action to adopt safety steps that can help prevent accidents and save lives. The following are ten of the current issues:

- Addressing Human Fatigue
- General Aviation Safety
- Safety Management Systems
- Runway Safety
- Bus Occupant Safety
- Pilot & Air Traffic Controller Professionalism
- Recorders
- Teen Driver Safety
- Addressing Alcohol-Impaired Driving
- Motorcycle Safety
NTSB Recommendations

- MOST WANTED 1990 - 2011
- >200 fatigue recommendations
Complex Issue:

Requires Multiple Solutions

- Scheduling Policies and Practices
- Education/Awareness
- Organizational Strategies
- Healthy Sleep
- Vehicle and Environmental Strategies
- Research and Evaluation
NTSB Fatigue Recommendations: Education/Strategies

• Develop a fatigue education and countermeasures training program

• Educate operators and schedulers

• Include information on use of strategies: naps, caffeine, etc.

• Review and update materials
Scheduling Policies and Practices

Victoria, Texas, January 2, 2008

Victoria, Texas, Fire Department

• Day sleep, night drive, ~ 4 am WOCL
NTSB Fatigue Recommendations: Hours of Service / Scheduling

• Science-based hours of service

• Allow for at least 8 hours of uninterrupted sleep

• Fatigue mitigation strategies in the hours-of-service regulations for passenger-carrying drivers who operate during the nighttime window of circadian low

• Reduce schedule irregularity and unpredictability
New Hours of Service Regulations
In 2011: Rail, Aviation, and Trucking

Train drain: new rules fight driver fatigue
February 6, 2012

FAA issues rules to ensure that pilots get enough rest
22 December 2011

FMCSA Sets New Rules To Encourage Truck Drivers To Get Enough Rest
01/20/12
Air Cargo Operations Excluded in New 2011 Pilot Rules

FOR IMMEDIATE RELEASE
Date: December 21, 2011
FAA Issues Final Rule on Pilot Fatigue
WASHINGTON, D.C. –

“Covering cargo operators under the new rule would be too costly compared to the benefits generated in this portion of the industry.”

FAA's new pilot fatigue rules aim to put concerns to rest
Safeguards, including minimum rest periods, will be phased in, don’t apply to cargo pilots

Chicago Tribune
Breaking News, Since 1847
Sleep Apnea

Mexican Hat, UT, January 6, 2008

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

• Ensure drivers with apnea are effectively treated before granting unrestricted medical certification
Owatonna, MN (July 31, 2008)

8 fatalities
7. Revise regulations and policies to permit appropriate use of prescription sleep medications by pilots under medical supervision for insomnia.

9. Review the policy standards for all common sleep-related conditions, including insomnia, and revise them in accordance with current scientific evidence to establish standards under which pilots can be effectively treated for common sleep disorders while retaining their medical certification.
NTSB Fatigue Recommendations: Fatigue Management Systems

- Develop guidance based on empirical and scientific evidence for operators to establish fatigue management systems.
- Establish an ongoing program to monitor, evaluate, report on, and continuously improve fatigue management programs implemented by motor carriers to identify, mitigate, and continuously reduce fatigue-related risks for drivers.
Examples

Fatigue Risk Management Systems
Implementation Guide for Operators
1st Edition
July 2011

FRMS
Fatigue Risk Management Systems
Manual for Regulators
2011 Edition
NTSB Safety Recommendations: Fatigue Status (May, 2012)

- **Total:** 194
- **Open:** 48
- **Closed:** 146
- **CUN*: 26

CUN = closed unacceptable
Manage Fatigue = Enhance Safety

- Culture change
- Get educated
- Acknowledge risk
- Take action!
Good sleep, safe travels.