

RiskTopics

Driver Fatigue October 2017

High profile news stories about crashes involving buses, trains and airplanes have highlighted the dangers of operating such vehicles while fatigued. While these public transit events tend to make the news, fatigue is a potential risk for anyone who operates a motor vehicle.

Introduction

Fatigue has long been recognized by the U.S. Department of Transportation as a significant problem for truck drivers, pilots, and engineers; so much so that the government has regulations limiting the number of hours these professionals can operate. Additionally, some states have taken steps to help reduce the number of automobiles involved in fatigue related crashes on their roadways. Whether subject to regulations or not, prudent risk managers should recognize the dangers of drowsy driving and develop sound management strategies to help combat fatigue related incidents.

Discussion

The Extent of the problem

Fatigue, like drugs and alcohol, may slow reaction time, decrease awareness and impair judgment:

- According to the National Highway Traffic Safety Administration, 846 fatalities (2.6% of all fatalities) in a single year were directly connected to fatigued driving.¹
- However, experts recognize that accurate statistics are challenging and a AAA Foundation for Traffic Safety study suggests that perhaps 7% of all crashes and 21% of fatal crashes involve drowsy driving.²
- More than two in five drivers (43.2%) report having fallen asleep or nodded off while driving, including 2.5% who had done so in the past month.²
- People sleeping less than five hours increase their crash risk by four to five times.³

The issues related to fatigued driving are exacerbated by sleep disorders. Many Americans suffer from sleep disorders that can have a very detrimental effect on their ability to stay awake and alert while driving. Sleep apnea, narcolepsy, and insomnia are just a few of the recognized disorders that keep those affected from getting enough sleep. The result is that sufferers are prone to fatigue and sleepiness during waking hours.

Unfortunately, these disorders are prevalent and many Americans have difficulty sleeping.

- A study by the American Transportation Research Institute reported that almost 5% of truck drivers suffered from severe sleep apnea, while 17.6% had mild cases. Sleep apnea is as common as adult diabetes and presents symptoms similar to sleep deprivation.⁴
- According to a National Sleep Foundation study on the matter, two-thirds of older adults report sleep problems. That study summarized that “Drowsy driving is an under-reported public safety issue plaguing America’s roadways.”³

Many states and the federal government are taking steps to discourage drowsy driving. New Jersey was the first state to pass a law that specifically criminalized drowsy driving in a fatal crash.¹¹ California and several other states consider drowsy driving to be reckless driving¹², and carries the same criminal charges and civil liability. A resulting fatality could result in a charge of vehicular manslaughter. At least 17 states now require drowsy driving awareness topics to be taught in driver’s education classes.⁵ Almost all states now include a code for fatigue or sleepiness on their police crash report investigation forms as a means to better track and understand the scope of the problem.

The Federal Motor Carrier Safety Administration (FMCSA) has implemented an entry-level driving training requirement on hours of service compliance for new holders of a commercial driver’s license. Additionally, a core component of the agency’s stated safety initiative is to identify and intervene with fleets where there is a pattern of evidence of driver fatigue.

Guidance

What you can do to help manage this risk

For any operation where the FMCSA hours of service regulations apply, those organizations are required by law to manage driver hours. As such, a first step is to determine if the FMCSA regulations apply to your drivers. If you operate interstate commercial vehicles, with a combined gross vehicle weight of greater than 10,000 lbs., transport hazardous material in a quantity which requires placarding, or designed to transport more than 15 people, the hours of service regulation (HOS) found in part 395 of the FMCSRs generally apply. Most states have adopted matching or similar regulations for intrastate fleets. A comprehensive review of the US DOT hours of service regulation can be found on the FMSCA web site at <https://www.fmcsa.dot.gov/regulations/hours-of-service>.⁶

Even so, companies are encouraged to remember that the hours of service regulations serve as a maximum limit of hours worked and that fatigue and drowsiness can occur before a driver reaches his allowable driving time. A Penn State research team found that a driver is three times more likely to be in a crash in the 11th hour than in the first hour behind the wheel.⁷ Consider establishing dispatching practices that not only comply with the regulations, but allow for scheduling flexibility to afford drivers restorative sleep opportunities, address individual driver needs, and recognize the variable nature of an individual’s susceptibility to fatigue. Failure to enforce compliance with hours of service regulations can result in

significant liability to an employer including revocation of operating authority, and civil and criminal penalties for both management and the driver.

Know the extent of your exposure. Even if the hours of service regulations do not apply to your operations, understand that a driver involved in a crash while working, or in a company vehicle, is detrimental to the company. These injuries can result in workers' compensation claims and liability to the other parties, to say nothing of the cost of repairing vehicles and other properties. You can also damage your company's reputation.

Recognize that even crashes that occur on an employee's own time may impact your organization if that employee is hurt or otherwise unable to work. Taking steps to prevent such incidents not only improves road safety for everyone, but may also directly benefit your organization.

Scheduling

Consider whether your organization's work and scheduling practices contribute to fatigue. Are your practices such that employees in general, and drivers in particular, are likely subject to higher fatigue risk while driving? Several studies have demonstrated that changes in work schedules are detrimental to natural sleep cycles or circadian rhythms.⁸

Economic incentives

Studies indicate that when employees perceive an economic benefit to driving while fatigued, they are often more motivated to do so. In fact, a study commissioned by the American Trucking demonstrated that a driver's or dispatcher's perception of a need to "get the job done" contribute to the likelihood of a fatigue related crash.⁹ Work to reduce the perception that financial performance (either corporate or individual) is more important than safety performance.

Vehicle technology

Consider Investing in technology that helps prevent fatigue related crashes. Many fleets have embraced electronic logging devices (ELD) as a key component of their hours of service compliance program. In addition to relieving drivers and company officials of the mundane task of completing and auditing driver logs, ELDs can help ensure drivers do not exceed the HOS regulations. Modern systems may also have added operational benefits that include everything from location tracking to engine diagnostics.

Lane departure warning and adaptive cruise control systems warn a driver when drifting into other lanes or approaching the vehicle in front too quickly, either of which may be a sign of fatigue. Systems are available that not only warn the driver, but accumulate performance data that can be downloaded for analysis of driving patterns. Monitoring systems that track and measure eye movement and head nods, while not widely available, have been designed and tested with encouraging results.

One company has developed a predictive modeling tool to determine how statistically likely it is that a driver may be involved in a significant crash within the next 30 days. The tool is based on a "fatigue score" that is calculated using a number of factors including shift scheduling and interruptions in daily routines such as changes in dispatch, etc. according to the model, each factor contributes to an increase in driver's fatigue score, thus increasing the chance a driver may be involved in an incident. Companies can use the fatigue score as a proactive management tool with its drivers.¹⁰

Sleep disorder treatment

Consider enhancing medical evaluations of drivers by incorporating evaluations for sleep disorders, particularly sleep apnea. Some progressive trucking companies now screen for sleep apnea and even go so far as to support treatment with in-truck CPAP units, which can help to mitigate sleep apnea and allow the driver to sleep properly.

Supervisory awareness training

Increase awareness among management staff. Help supervisory personnel to recognize the signs and symptoms of fatigue. Teach them to recognize individual differences in drivers' fatigue potential, just as they would other driving skills. Help them learn the warning signs of drivers that may have a proclivity to fatigue as evidenced by some common warning signs such as being repeatedly late, frequent yawning, and redness in the eyes, and take steps to combat it.

Give consideration to the level of physical activity required of an employee before he embarks on a trip. Is it prudent to ask someone who has worked long hours to drive several hours afterwards? Both physical and mental activity and stress can be very tiring. Help supervisors to consider these factors in the scheduling and dispatch process.

Trend analysis

Evaluate the characteristics of crashes in your organization to determine if there are indicators of fatigue-related losses. Telltale signs may include roadway departures, and patterns of crashes late at night, early morning, or mid-afternoon. All may be indicators that fatigue played a role in the event.

Driver awareness training

Promote individual awareness and countermeasures among employees. Teach them to recognize signs such as persistent yawning, difficulty focusing, wandering or disconnected thoughts, driving or hitting rumble strips, or the inability to remember the last few miles of driving. Heat, discomfort, blood sugar levels, and other individual conditions can affect one's level of alertness. Encourage each driver to recognize their personal challenges with regard to staying alert behind the wheel.

Recent studies have shown the value of promoting good health through diet and exercise in reducing chronic fatigue. Help drivers recognize the signs of sleep apnea or other sleep disorders and seek treatment. Encourage them to ask their doctors about the impact medical conditions and medications may have on their ability to drive safely.

Recognize that boredom and routine can contribute to fatigue while driving. Drivers that become too complacent with the driving task may be more likely to become drowsy due to a lack of mental stimulation. Using best practice defensive driving skills can help drivers to stay actively engaged and more alert. Above all, stress the importance that drivers show up rested and ready for the challenges of the day.

Educate drivers to understand that taking actions such as drinking coffee or other caffeinated drinks, rolling down the window, and turning up the radio are all just short-term fixes, and not real solutions for fatigue. In such instances, using cruise control can result in even higher risks for fatigue-related crashes.

On a final note, train drivers to recognize possible fatigue signs from others and be wary of them. Instruct them to be very cautious when attempting to pass a vehicle being driven erratically and maintain as much distance as possible.

Conclusion

Safety, productivity, morale, and general employee wellness can all be impacted by fatigue in the workplace, especially when it relates to the operation of a motor vehicle.

Companies also have a legal obligation to support compliance with regulations, and can be in jeopardy both criminally and in terms of liability if they fail to do so. While a company may not be directly liable for its employees' actions, it can be held vicariously liable for dangerous behavior and negligent actions of its employees while conducting company business.

References

1. "Research on Drowsy Driving-Scope of the Problem webpage." National Highway Traffic Safety Administration (NHTSA). Web. 5 October 2016.
<<http://www.nhtsa.gov/Driving+Safety/Drowsy+Driving/scope-of-the-problem>>
2. Tefft, Brian C. "Prevalence of Motor Vehicle Crashes Involving Drowsy Drivers, United States, 2009 – 2013". AAA Foundation for Traffic Safety. November 2014. Web. 5 October 2016.
<<https://www.aaafoundation.org/drowsy-driving>>
3. "Facts and Stats webpage." National Sleep Foundation. Web. 5 October 2016.
<<http://drowsydriving.org/about/facts-and-stats>>
4. Pack, Dinges & DF, Maislin G. "A Study of Prevalence of Sleep Apnea among Commercial Truck Drivers, FMCSA (Publication No. DOT-RT-02-030)." U.S. Department of Transportation. July 2002. Web. 5 October 2016. <<http://ntl.bts.gov/lib/51000/51300/51357/Sleep-Apnea-TechBrief.pdf>>
5. "States Asleep at the Wheel in Fighting Drowsy Driving." U.S. News and World Report. 11 November 2008. Web. 5 October 2016. <<http://health.usnews.com/health-news/managing-your-healthcare/articles/2008/11/11/states-asleep-at-the-wheel-in-fighting-drowsy>>
6. "Hours of Service – Who Must Comply?" Federal Motor Carrier Administration (FMCSA). Web. 5 October 2016. <<https://www.fmcsa.dot.gov/regulations/hours-of-service>>
7. PennState News. "Penn State study finds risk higher for truckers in 11th-hour." Pennsylvania State University. 15 November 2005. Web. 5 October 2016.
<<http://news.psu.edu/story/207071/2005/11/15/research/penn-state-study-finds-risk-higher-truckers-11th-hour>>
8. NIOSH Science Blog website. "Sleep and Work." Centers for Disease Control and Prevention. 8 March 2012. Web. 24 October 2016. <<https://blogs.cdc.gov/niosh-science-blog/2012/03/08/sleep-and-work/>>
9. "Motor Carrier Scheduling Practices and Their Influence on Driver Fatigue, Report No. FMCSA-RT-03-005." Federal Motor Carrier Safety Administration (FMCSA). October 2002. <<https://www.fmcsa.dot.gov/advisory-committees/mcsac/motor-carrier-scheduling-practices-and-their-influence-driver-fatigue>>

10. InterDynamics website. InterDynamics. 24 October 2016. <https://www.interdynamics.com/>
11. Mann, Denise. "Driving Drowsy Could Land You in Jail." WebMD. 1 October 2003. 24 October 2016. <<http://www.webmd.com/sleep-disorders/news/20031001/driving-drowsy#1>>
12. "Drowsy Driving." The Kavinoky Law Firm. 4 May 2012. Web. 24 October 2016. <<https://www.nocuffs.com/drowsy-driving-2/>>

Resources

- Gurubhagavatula, Indira & Maislin, Greg & Nkwuo, Jonathan & , Pack, Allan. "Occupational Screening for Obstructive Sleep Apnea in Commercial Drivers." American Journal of Respiratory and Critical Care Medicine. 2004.
- "Drowsy Driving Research and Statistics." National Safety Council. Web. 5 October 2016. <http://www.nsc.org/NSCDocuments_Advocacy/Fact%20Sheets/Drowsy-Driving.pdf>
- "Hours of Service regulations." Federal Motor Carrier Safety Administration. Web. 5 October 2016. <<https://www.fmcsa.dot.gov/regulations/hours-service/summary-hours-service-regulations>>

The Zurich Services Corporation
Risk Engineering
1299 Zurich Way, Schaumburg, Illinois 60196-1056
800 982 5964 www.zurichna.com

The information in this publication was compiled from sources believed to be reliable for informational purposes only. All sample policies and procedures herein should serve as a guideline, which you can use to create your own policies and procedures. We trust that you will customize these samples to reflect your own operations and believe that these samples may serve as a helpful platform for this endeavor. Any and all information contained herein is not intended to constitute advice (particularly not legal advice). Accordingly, persons requiring advice should consult independent advisors when developing programs and policies. We do not guarantee the accuracy of this information or any results and further assume no liability in connection with this publication and sample policies and procedures, including any information, methods or safety suggestions contained herein. We undertake no obligation to publicly update or revise any of this information, whether to reflect new information, future developments, events or circumstances or otherwise. Moreover, Zurich reminds you that this cannot be assumed to contain every acceptable safety and compliance procedure or that additional procedures might not be appropriate under the circumstances. The subject matter of this publication is not tied to any specific insurance product nor will adopting these policies and procedures ensure coverage under any insurance policy.

© 2017 The Zurich Services Corporation. All rights reserved.



ZURICH[®]