Owner-Operator's Business Association of Canada
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...from the director's chair

Putting hours-of-service to rest

Joanne Ritchie: OBAC executive director

There are a handful of subjects like the driver shortage, truck parking, and hours-of-service (HoS) that never drop off trucking's gripe list, they just jockey for position as the industry's most critical problem. Right now, the most hotly debated issue is probably HoS, pumped up because of the U.S. electronic logging device (ELD) mandate and the shadow of similar regulation in Canada.

It comes down to this: how effective are HoS in keeping "fatigued" drivers off the road? It's a common scenario: you might be perfectly rested, alert, and safe, but can't get behind the wheel because you're out of hours. Conversely, you have lots of hours left, but are so drowsy your eyelids are fluttering, yet you're expected to keep going. In any case, ELDs effectively remove any vestige of a driver's self-management of alertness from the equation, so the debate is largely hypothetical.

One of the most comprehensive pieces of research I've read that includes a forthright discussion of fatigue and road safety is a paper titled Addressing Human Factors In The Motor Carrier Industry In Canada, published in 2011 by Pierre Thiffault, a senior research analyst with Transport Canada. While wading through the complex scientific report is no walk in the park, it is nevertheless enlightening.

Thiffault acknowledges that HoS rules provide a necessary regulatory framework to ensure commercial drivers operate within essential sleep science principles. However, while the regs theoretically address important risk factors, they have significant limitations. For one thing, they fall short of acknowledging that fatigue is a spectrum of brain alertness, from more to less; in other words, factoring the difference between drowsiness and fatigue into road safety.

While we're moving toward fatigue, lots of other things are going on in our bodies and our brains. Inattention and drowsiness occur long before actual fatigue takes over, but if your logbook says you've got time left on the clock, you're good to go.

So, while HoS regulations are necessary, they're not sufficient to really address fatigue. The reality that most stakeholders either don't understand or turn a blind eye to is that we spend a lot more time in a drowsy state, which in many respects is where the greatest risk lies.

It's generally accepted that monotony or "highway hypnosis" decreases alertness and increases drowsiness, and there is a growing interest in examining the impact of automated vehicles and platooning on a driver's alertness and vigilance.

Now, new research coming out of Australia's Royal Melbourne Institute of Technology shows that low-frequency vibrations can make drivers drowsy. CBC radio's Quirks and Quarks recently featured an interview with Professor Stephen Robinson, head of the psychology department at the institute. Comprehensive experiments showed that low-frequency vibrations coming up through the floor of a vehicle and through the seat are causing driver drowsiness.

We're not talking about sleep-deprived, end of shift drivers. Just 15 to 30 minutes of vibrations put the otherwise rested drivers at high risk of a crash.

Last year, researchers at the University of Waterloo conducted a field study to determine the impact of whole body vibration (WBV) on truck driver vigilance and discomfort. The results showed that new seat technology was able to reduce WBV exposure up to 55% and consequently reduce fatigue-related vigilance over the course of a day.

The adverse health effects of WBV, like muscular disorders and lower back pain, have been known for some time, but the work at Waterloo was the first to look at the effects of WBV on vigilance in truck drivers.

Whether it's killer seats or boring terrain, most drivers understand that driving with drooping eyelids is risky, yet they tend to fight sleepiness with effort – windows down, radio up – and keep going.

In trying to understand the discrepancy between drivers' actions and their knowledge of the safety risks of drowsy driving, Thiffault's extensive discussions with drivers revealed that the way trucking "works" is a significant shaper of their motivations, and things like compensation schemes, scheduling, company policy, and carrier/shipper relations, weigh heavily on a driver's decision to take the risk.

The bottom line is we're living dangerously to count on HoS to be the only, or even the primary, means to address driver fatigue.

Perhaps if stakeholders paid more attention to emerging research that doesn't lump alertness, drowsiness, and sleep into one big bundle labeled "fatigue" that can be managed by regulation, we might just be able to put HoS to rest.

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