

**ASC60 Operator Health and Wellness Subcommittee
TRB Annual Meeting, (Virtual)
Monday, January 11, 2021**

Chair: Karl Sieber

Attendees:

Matt Camden	Rob Molloy
Jeff Hickman	Ed Watt
Matt Parkinson	Sharon Newnam
Julie Perrot	Ron Knipling
Andrew King	Erin Mabry
Seri Park	Terri Hallquist
Bob Scopatz	Deborah Quackenbush
Hend Alzamil	Pete VanDyne
Dollena McHenry	Brenda Lantz
Andrew Krum	Sara Mostowfi
George Park	Pierro Hirsch
Pete Johnson	

Agenda:

12:00 – 12:10	Welcome and Introductions
12:10 – 12:30	The NTSB Investigation of the Randolph, NH Crash between a Pickup Truck with Trailer and Group of Motorcycles Rob Molloy Director, Office of Highway Safety National Transportation Safety Board
12:30 – 12:50	Undiagnosed Obstructive Sleep Apnea in Commercial Motor Vehicle Drivers: Application of STOP-Bang Dr. Jeffrey Hickman Virginia Technical Transportation Institute
12:50 – 1:10	Bus Operator Workstation Design Dr. Matthew B. Parkinson, Ph.D. Professor, Engineering Design, Mechanical Engineering, and Industrial Engineering Director, The Learning Factory The Pennsylvania State University
1:10 – 1:15	Update on NIOSH transportation research Karl Sieber, NIOSH

1:15 – 1:30

Other comments/research ideas
Upcoming events
Open Mike

Presentations:

Rob Molloy: The NTSB Investigation of the Randolph, NH Crash between a Pickup Truck with Trailer and Group of Motorcycles

Rob presented on an NTSB investigation of a driver distraction case with fatalities. He reviewed the driver's history of substance abuse and potential fatigue issues. The CMV was a pickup truck converted to have a "sleeper berth" that was not well designed. The driver had arrests for possession and Operating under Influence. He lied on his medical check for substance abuse and received no treatment. The company hired him without a background check or driver license check. He was suspended in Connecticut and his state of residence was notified. There was no license revocation in Massachusetts. He was due to receive a suspension in about 1.5 weeks but the queue was never checked. The item was not resolved. Massachusetts failed to review over 10,000 paper notices of suspension from other States. They stopped processing those in 2013. They have since addressed the problem with new processes and assigned staff. Other neighboring states have similar problems and were given NTSB recommendations for sending and receiving notices of suspension. The motorcyclists in the crash were impaired by alcohol. Recommended lowering the per set BAC limit to .05.

Ron Knipling asked if the pickup truck operator was a commercial driver. He said that there are some drivers who do not hold a CDL but are commercial drivers. Rob said that this driver did have a CDL but the job didn't require it.

Karl Sieber asked if the crash would have been listed by FMCSA's system on drug use? Because it was a vehicle that doesn't require a CDL it is unlikely that the crash would have been included on this new list.

Jeff Hickman: Undiagnosed Obstructive Sleep Apnea in Commercial Motor Vehicle Drivers: Application of STOP-Bang

Jeff presented on undiagnosed obstructive sleep apnea (OSA). Jeff started by defining OSA and its impact on fatigue and crash risk. OSA is correlated with other health risks as well. Treatment is effective in also lowering crash risk. He presented the variety of treatments available. Prevalence is difficult to estimate but may be roughly 30% of all commercial drivers. Jeff presented on the variety of OSA screening methods. The preference is for objective measures versus self-reports. The STOP-Bang (SB) has a mix of objective and subjective criteria. It is useful because the objective measures might catch OSA even if the driver is not forthcoming on the subjective questions. The study was designed to estimate prevalence of potential OSA and recalculate the OSA-related crash risk. The baseline diagnosis prevalence is presumed to be too low (7.2%) given the prevalence of correlated medical conditions. The study included 981 diagnosed and 879 potential diagnosable with OSA. Classified participants at low-risk, intermediate-, or high-risk with separate buckets for diagnosed/untreated; diagnosed/treated, and undiagnosed. They estimated prevalence by reallocating people into the potentially OSA group based on STOP BANG. Then, they replicated the Commercial Driver Safety Risk Factors analysis. Normalized by age quartiles and treatment/diagnosis. Outcome variables include reportable crashes, motor carrier-based crash records (all and preventable), and moving violations. Calculated risk ratios. Ultimately, the risk

ratios didn't change; however, the regroupings mean that there is a much larger percentage of drivers likely OSA sufferers, just not yet diagnosed.

George Park asked how might STOP Bang analysis comply or differ from something that might occur in a sleep clinic? STOP bang analysis may be used as a screening tool for OSA, which might be confirmed in a sleep clinic.

Matt Parkinson: Bus Operator Workstation Design

Matt is doing research on usability and variability among users. Matt critiqued currently used tools for measuring accommodation – looking at single components of a design at a time. This issue has a long history in design and human factors research. UMTRI developed the Cascading Posture Prediction Model based on extremely adjustable seating and controls. By applying CPPM, they can determine what percentage of drivers, in which situations, are not accommodated by a specific design. They digitized designs and checked what percentage of drivers were accommodated and then came up with new designs that accommodated a greater percentage of drivers. The differences are striking, especially for women—increases in percentage accommodated from the mid-thirties to roughly 90 percent.

Karl Sieber: Update on NIOSH Transportation Research

Karl presented on the CDC's COVID-19 Vaccines and Program. The Advisory Committee on Immunization Practices (ACIP). The recommendations are available online at the CDC website. Specifically for transportation workers, there are some in Phase 1b for Public Transit and USPS. Phase 1c brings in Transportation and Logistics workers. At NIOSH/CDC they have been working to gather input on strategies to support vaccine uptake among transportation workers. They are interested in hearing about knowledge, requirements, industry practices, barriers, and best ways to communicate with workers.

Deborah Quackenbush asked why individuals under 75, say between 60 and 75 that are at risk (say diabetes, et c) are not being vaccinated sooner. Karl replied that these are ACIP recommendations ([Evidence Table for COVID-19 Vaccines Allocation in Phases 1b and 1c of the Vaccination Program \(cdc.gov\)](#)). Many in this age group still work or care for others.

Discussion and Other Comments

Ron Knipling asked for an update on the NIOSH evaluation of the North American Fatigue Management Program? Jeff Hickman said that they are waiting for OMB review.

Stephan Parker (TRB) asked the group to submit to the cooperative research programs. There are new panels forming if you are interested: they are for 1) TCRP Project F-29, Mental Health, Wellness, and Resilience for Transit System Workers. And 2) TCRP Project F-30, Ensuring the Health and Safety of Transportation System Operators and Others in the Transportation Workforce. Nominations are due February 8.

Peter Johnson talked about research on fatigue and reaction time on a psychomotor vigilance task. He invited people to reach out to him if they'd like more information.