



Road Safety Authority Academic Lecture 2020

Driver Fatigue

5 October 2020



Road Safety Authority Academic Lecture 'Webinar' 2020 *'Driver Fatigue'*

Date: Monday 5 October 2020
Time: 11:00am to 1:00pm approx.

Agenda

- 11:00am** **Introduction**
Mr John Caulfield
- 11:05am** **Welcome Address**
Ms Liz O'Donnell, Chairperson, Road Safety Authority
- 11:10am** **A Message from the Minister of State at the Department of Transport**
Hildegard Naughton TD, Minister of State at the Department of Transport
- 11:15am** **Sleep Apnoea as a treatable cause of driver fatigue**
Professor Walter McNicholas, Consultant in Respiratory and Sleep Medicine,
University College Dublin and St Vincent's Private Hospital
- 11:30am** **Driver Fatigue – The problem and countermeasures**
Dr Charles Goldenbeld, SWOV, The Netherlands
- 11:55pm** **Driver Fatigue: What we know and what we don't know**
Dr Ashleigh Filtness, Senior Lecturer of Human Factors in Transport Safety,
Loughborough University, England
- 12:20pm** **Questions and Answers**
- 12:35pm** **Poll Results**
Mr John Caulfield
- 12.45pm** **Closing Address**
Mr Sam Waide, Chief Executive, Road Safety Authority
- 12:50pm** **Conference Closes**

Speaker Biographies and Abstracts

Sleep Apnoea as a treatable cause of driver fatigue

Professor Walter McNicholas, Consultant in Respiratory and Sleep Medicine, University College Dublin and St Vincent's Private Hospital



Walter McNicholas MD, FRCPI, FRCPC, FERS is a Consultant in Respiratory and Sleep Medicine at St. Vincent's Hospital Group, Dublin, and Newman Clinical Research Professor at UCD. He is a UCD graduate and undertook his postgraduate training at the University of Toronto.

Walter is very active in research and has published over 240 papers in International Peer-reviewed Journals (H-index 71). He is President of the European Sleep Research Society and Past President of the European Respiratory Society. Walter also chaired a Working Group of the European Commission on Sleep Apnoea and Driving (2012-2014), which led to an EU Directive on the topic that is now mandatory throughout Europe.

Abstract

Fatigue or sleepiness accounts for up to 25% of major highway accidents; obstructive sleep apnoea (OSA) is the most common medical disorder associated with sleepiness. The condition is a result of repeated obstruction of the throat during sleep, resulting in disturbed sleep and daytime sleepiness, in addition to a range of medical consequences such as hypertension and stroke. OSA is well recognised to be a major risk factor for driving accidents, and this risk is alleviated by successful treatment. Thus, the European Commission established a working group on OSA and driving in 2012, that led to an EU Directive in 2014 that is now mandatory throughout the EU. This directive specifies that sleepy drivers suffering from OSA cannot continue driving until the disorder is successfully treated. There is an urgent requirement for education of drivers, clinicians, and the transport industry on the importance of identifying such patients, which benefits both the affected driver and the general public.

Driver Fatigue – The problem and countermeasures

Dr Charles Goldenbeld, SWOV, The Netherlands



Charles Goldenbeld is a senior researcher for the Dutch Road Safety Institute SWOV. SWOV is an independent research institute that aims to make traffic safer by providing scientific evidence on road safety issues.

Since 1992 Charles has been involved in road safety research on traffic behaviour and attitudes, traffic enforcement and road safety campaigns. He has participated in several European research projects on road safety (BestPoint, CAST, ESCAPE, GADGET, PEPPER, SARTRE 1-4, SafetyNET, DaCoTa, Promising, SaferAfrica, SafetyCube, Sunflower, & ESRA1, ESRA2). In his free time he watches movies, plays badminton, eats ice creams, reads comics and books.

Abstract

Driver fatigue can be defined as “a general psychophysiological state which diminishes the ability of the individual to perform the driving task by altering alertness and vigilance”. Driver fatigue can be sleep-related (lack of sleep in 24 hours before driving, medical sleep disorder) or task-related (long hours driving). It has been estimated that fatigue plays a contributing role in 15-20% of crashes. In Europe about one in every five drivers admits to having driven, in the past 30 days, while being so sleepy that they had trouble keeping eyes open. The major risk groups for driving while fatigued are young males, truck drivers, taxi drivers, persons with a medical sleep disorder and persons doing shift work. Counter measures against driver fatigue are regulations and enforcement, education and information campaigns, road infrastructure measures (rumble strips, rest areas, obstacle-free zones), and intelligent vehicle driving support systems, including drowsy detection system. Fatigue is a stubborn problem and future vehicle technology can only help to reduce it if drivers accept it, activate it and act upon it.

Driver Fatigue: What we know and what we don't know

Dr Ashleigh Filtness, Senior Lecturer of Human Factors in Transport Safety, Loughborough University, England



Dr Ashleigh Filtness is a Senior Lecturer of Human Factors in Transport Safety in the Transport Safety Research Centre based in the School of Design and Creative Arts at Loughborough University.

She has 13 years' experience in safety research specialising in driver sleepiness and driver fatigue. Ashleigh was awarded her PhD from Loughborough University, UK in 2011 for her thesis entitled *Obstructive sleep apnoea and daytime driver sleepiness*. Following the completion of her PhD, Ashleigh moved to Australia for 5 years working both at Monash University Accident Research Centre (MUARC) and then Centre for Accident Research and Road Safety-Queensland (CARRS-Q) before returning to Loughborough University. To date Ashleigh has authored over 70 peer reviewed publications and led numerous research projects with both academic and industry focus.

Abstract

Sleepiness and fatigue are an everyday experience for all people. In every 24-hour period everybody gets tired and can naturally fall asleep. The problem comes if extreme sleepiness and fatigue are experienced while also doing something safety critical, such as driving. We know a lot about driver fatigue including the type of individual and environment factors which can increase the risk of fatigue. This knowledge helps us to direct our efforts to mitigate the safety impact of fatigue. However, there is a lot we still do not know. This presentation considers some of the lesser talked about areas of driver fatigue, seeking to challenge some of the key stereotypes of what driver fatigue looks like. Keeping an open mind to all aspects of driver fatigue is necessary to advance the field and tackle the future challenges of the persistent problem of driver fatigue.