

# The Safety Network/ Le Réseau-Sécurité



## Issue 2 2019

### IN THIS ISSUE

Editorial/Éditorial	Page 2	#SlowDownMoveOver	Page 15
Re-imagining mobility: e-scooters and their emerging role in our transportation systems	Page 3	Preferred Towing	Page 17
Distracted Driving is NEVER worth a life	Page 5	BC's Cone Zone: Increasing safety for roadside workers	Page 20
CARSP Member Receives International Award	Page 9	Qualitative Research Study: The Health Experiences of Long-Haul Truck Drivers	Page 23
Un membre de l'ACPSER reçoit un prix international	Page 11	Send Us Your Articles	Page 26
Motorcycle and Bicycle Emergency Preparedness: One Safety Product, Three Benefits	Page 13	Committee Member Profiles	Page 27
		Acknowledgements	Page 28

## Editorial

I am very excited to bring you this issue with a wide variety of articles covering topics such as the health of long-haul truck drivers, the new product and issues with E-scooters, and a series of articles looking at experiences from the perspectives of a police officer, a tow truck professional and those working at the roadside.

As always, the articles we bring you are to inform and spark new thinking, bring different perspectives forward, and encourage networking.

The next issue of The Safety Network Newsletter will feature highlights from the 2019 Canadian Association of Road Safety Professionals Annual Conference held in Calgary, Alberta.

*Pamela Fuselli*  
Chief Editor

## Éditorial

C'est avec enthousiasme que je vous présente une grande variété d'articles traitant de sujets tels que la santé des conducteurs de poids lourds, les nouveaux produits et les problèmes liés aux scooters électriques, ainsi qu'une série d'articles présentant un policier, un professionnel opérant une dépanneuse et d'autres personnes travaillant aux abords de la route.

Comme toujours, les articles que nous vous proposons sont destinés à informer et à susciter de nouvelles idées, à présenter des perspectives différentes et à encourager le réseautage.

Le prochain numéro du Bulletin présentera les points saillants du congrès annuel de l'Association canadienne des professionnels de la sécurité routière, organisé en 2019 à Calgary, en Alberta.

*Pamella Fuselli*  
Éditrice en chef

## Re-imagining mobility: e-scooters and their emerging role in our transportation systems

By Samantha Leger

*Samantha is a Transportation Planner for WSP. She holds a Bachelor's Degree from the University of Waterloo in Environmental Studies, majoring in Urban Planning and specializing in urban design. Since joining WSP in 2018, Samantha pursued opportunities in sustainable mobility and inclusive transportation planning. She is also a key contact for WSP's Global Vision Zero Strategy.*

### Résumé

Les scooters électriques et la micro-mobilité (petits véhicules électriques à propulsion humaine) font rapidement leur apparition et ils pourraient éventuellement modifier le paysage des transports. Malgré le flou entourant leur rôle précis, l'intégration des scooters électriques et de la micro-mobilité aux réseaux actuels de transport est inévitable, en raison de l'intérêt suscité à leur égard. Il est donc crucial que l'Ontario observe des entités territoriales comparables, pour mieux comprendre comment l'afflux de scooters électriques affectera le secteur des transports. Les solutions à déployer sont aussi variées que le problème est complexe. Cela nécessite une réflexion approfondie sur la manière dont les infrastructures, les autres modes de transport et la communauté en général, notamment la santé et la sécurité des utilisateurs, seront affectés par l'émergence des scooters électriques.

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Dockless e-scooter sharing systems are on the rise, quickly emerging as a new sustainable mode of transportation. Their arrival in Canada is imminent; across the U.S., many independent mobility-sharing services have introduced fleets of e-scooters that can be rented for a low cost and ridden in bike lanes and roadways.(1) Successfully integrating new modes of transportation within communities is multi-faceted; multi-modal safety, community health, and the public realm all need to be considered when looking to create legislation and infrastructure that can support these newly emerging modes of transportation.

As a mode of micromobility, small electric and human powered vehicles like e-scooters expand the viability of active transportation and are sustainable, active, and affordable.(2) E-scooters offer the potential to reduce single-occupant vehicle trips and thereby reduce the sustainability and health problems that can be associated with auto-dependency.(3,4) When we consider micromobility as an alternative travel mode to single occupant motor vehicles, it addresses gaps within the sustainable transportation network. We refer to these gaps as the "missing middle" of transportation. The missing middle can refer to trip types, technology options, network connections and demographics that are currently left out of how we plan for, and implement, transportation. Planning for transportation options that can fill the missing middle allows for a wider demographic to access essential amenities and destinations within their communities, offer sustainable alternatives to the automobile, and provide new

industries within the transportation field. A notable element of the missing middle is the first and last mile trips - the distances between transit stops and the beginning and end of a trip.

However, the rapid expansion of e-scooters is perceived to also be associated with safety, operational, health, and community concerns. E-scooters have emerged faster than changes in legislation or infrastructure, and preliminary research suggests they are associated with more injury-causing collisions than other forms of active transportation.(5) Given that they often are implemented with dockless systems, there is also concerns that they could obstruct the use of sidewalks in the public realm.(6) As a result local municipalities are being challenged in developing and then implementing appropriate e-scooter policy and programs. Currently in Ontario, and most of Canada, e-scooters are not permitted to operate within public road right-of-ways.(7) As the interest and opportunity continues to grow, incorporating e-scooters into our transportation network is inevitable; despite the lack of clarity surrounding what their role will look like. In the spring of 2018, WSP Canada distributed a survey to key municipal stakeholders that explored the current perception of micromobility in Ontario, including opinions on e-scooters. Nearly all participants agreed that the role of micromobility will be crucial as we look towards the future of transportation. However, the survey found that when compared to other forms of micromobility, such as e-bikes, e-scooters garnered the most questions and uncertainty. It is crucial moving forward that Ontario look to comparable jurisdictions to understand how the influx of e-scooters will affect our transportation landscape. The solution will be just as multi-faceted as the issue, and will require careful thought on how the community, health and safety of riders, available infrastructure, and other mobility modes will be affected by the emergence of e-scooters.

For more on micromobility, and the results of our survey please read the following WSP publication: [WSP E-bike White Paper](#)

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## Distracted Driving is NEVER worth a life

By Debra Shirley, PhD FACP and James M. Elliott, PT, PhD, FAPTA

*Debra Shirley is a Specialist Musculoskeletal Physiotherapist and academic/researcher at the University of Sydney with experience in teaching musculoskeletal physiotherapy and researching traumatic causes of neck pain and disability.*

*James M Elliott is a Professor of Allied Health in the Faculty of Health Sciences at the University of Sydney and the Northern Sydney Local Health District, and is an adjunct Professor and Principal Investigator of the Neuromuscular Imaging Research Laboratory in the Feinberg School of Medicine at Northwestern University in Chicago, USA.*

### Résumé

Au quotidien, pourrions-nous nous livrer à des activités connues pour augmenter le risque de blessure (ou de décès) pour nous-mêmes et mettre également en danger la vie de ceux qui nous entourent? La réponse simple est, jamais. Malheureusement, c'est plus de la moitié de la population mondiale qui fait fi de ce rationnel et reconnaît avoir effectué des activités susceptibles de compromettre lorsqu'ils conduisent non seulement leurs sécurités, mais également celles de ses passagers, des piétons et des personnes se trouvant à proximité des véhicules. La question est la suivante: que faudra-t-il pour que "vous" repensiez vos priorités en #SécuritéRoutière (#RoadSafety) lorsque vous êtes au volant?

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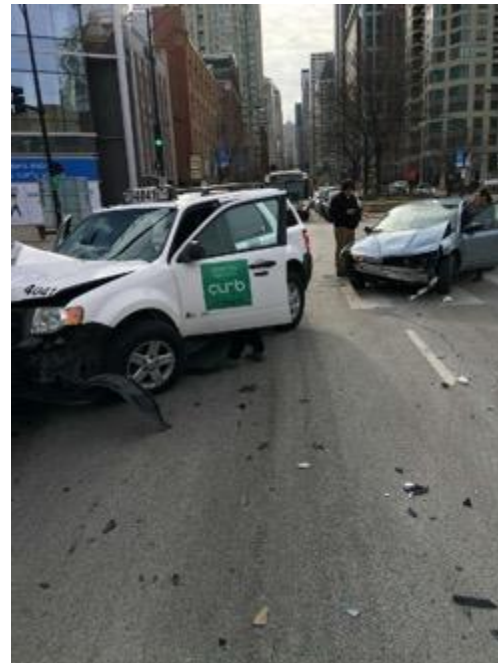
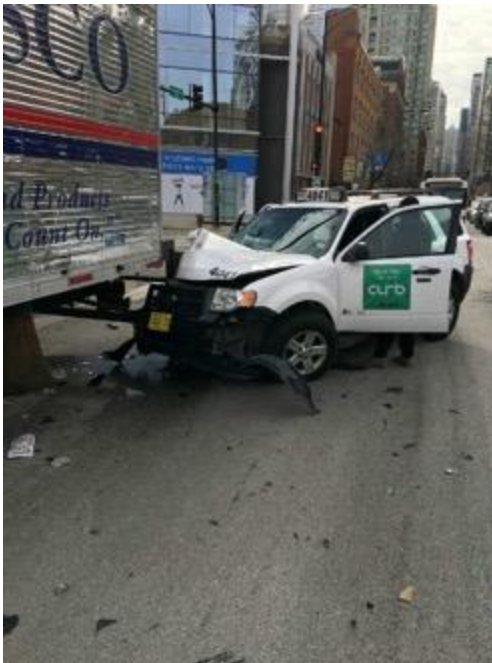
We're going to go out on a limb and guess that every one of you reading this is already well-aware of the public health concerns, the statistics, the efforts to, and challenges around, educating our fellow community members about the dangers of distracted driving. So, we'd like to take a different path with this piece.

Today was not like any other day for a one-car family. While I typically combine a bus and train to work, I decided to drive as I had an earlier-than-usual meeting at the University. I was quickly reminded that the public train not only provided for un-interrupted 'me-time' that I could use to get lost in i) a book, ii) some work, iii) watching the world go by or iv) the latest Spotify® downloads. My attention this time was focussed on and limited to an imminent zipper merge in the left-lane where the flashing lights of the emergency services vehicles ahead could be seen, suggesting the occurrence of an 'accident.'

As an academic researcher making a living studying the consequences of trauma and the injuries that many, but not all, sustain from a motor vehicle collision (MVC), I could not help but wonder the cause of the MVC ahead? Was it an unpredictable 'Act of God', which means it could be an accident? Was someone at-fault? If yes, was the at-fault driver distracted? What was the distraction? Was it one of many new *whiz-bang* interactive dynamic and very colourful dashboard features of new cars today? Was he/she eating, reading a paper, loving the lap-riding family dog, chatting with a passenger, tuning in the radio, grooming, or engaging in their smart-phone? Of course, I'll never know the cause (or causes) of the crash that brought traffic to a halt...but safe to say, based on the latest stats, a distracted driver (or drivers) could have featured; which, of course means it WAS NOT an accident!

The Canadian Automobile Association quotes very sobering statistics that should make everyone question their own behaviour. (1) 10% of fatal crashes, 15% of injury crashes, and 14% of all police-reported motor vehicle traffic crashes were distraction-affected crashes.(2) Further estimates suggest that up to 80% of all *accidents* are related to driver distraction (3) ... that is EIGHT OF OUT TEN were preventable. They were not accidents.

We are forever bombarded with stories of death and serious injury due to mobile/cell phone use while driving and many motoring organizations have utilized a variety of strategies, including graphic images and videos, to draw attention to this preventable cause of injury and death. Despite these powerful campaigns, the numbers of people killed or permanently injured from these preventable events have not lessened...on the contrary, they seem to be increasing. Have we become immune to the powerful campaigns, thinking (or believing) it won't happen to me or my family? Or do we think we are doing the right thing because we 'safely' utilize the pre-installed hands-free onboard technologies?



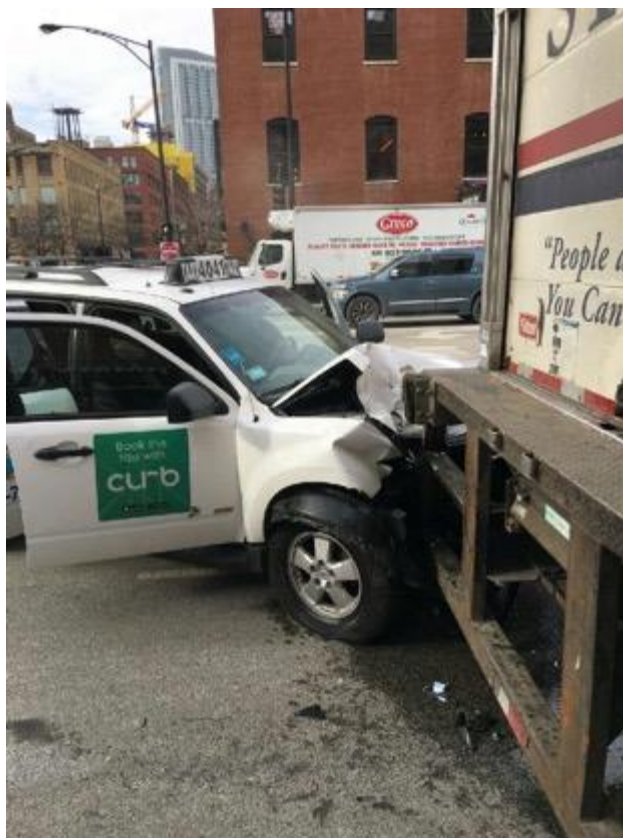
The singular, and combined efforts of many organizations, such as (but not limited to) *Drop It And Drive®* (@DropItAndDrive), the *Traffic Injury Research Foundation* (@TIRFCANADA), *Hang Up And Drive* (@JacyGood) and *@DriveEasyApp* (USA) have identified the need for partnerships, shared information, and access to interpretable research findings to guide decision-making, and establish effective strategies to reduce, if not eliminate, preventable injuries/fatalities from distracted driving, including whiplash associated disorders.

So, what will it take to stop distracted driving? What will be the motivating force to make people - *YOU* - change their - *YOUR* - behaviour? Sadly, driving seems to have become a last-person standing task where drivers are not fully-engaged in the act of driving, failing to

recognise that engaging in anything other than the task at hand is not conducive to safely operating a motor vehicle...full-stop.

This year tougher penalties for cell phone use while driving were introduced in Ontario, Canada starting with a \$1,000 fine, a three-day suspension and three demerit points (4) for first time offenders. Other countries have brought forth similar sanctions including steeper fines, licence suspension, and demerit points. However, we could question whether these sanctions go far enough to adequately change behaviour. Consider this...over 40% of adult drivers report answering calls during driving each day, one-third make calls, one-quarter read text messages, and one-in-five report sending text messages (5) with or without hands-free access.

Instances where phone use while driving is legal include making or answering calls, using audio functions and as a driver's aid only when the phone/device is in a cradle and can be operated without physical contact and when the device is not obstructing view of the road (6). However, despite being legally permitted, is the known distraction of these actions more than we should tolerate? And, let's not be fooled by navigation devices. While many feel they are acceptable as they can be activated prior to commencing driving, they do not remove distractions from the equation as their use is accompanied by the continual alerts re: upcoming traffic conditions, which of course require and divert the driver's attention.



Clearly to be effective in changing driver behaviour there needs to be a multi-pronged effort and combining several approaches is necessary for effective prevention, e.g., policy making, changing laws, advocacy, community-based programs and behaviour change programs (7). So, the answer perhaps lies in a combination of measures requiring individuals to find their own motivator for change. For some, risk of losing their licence may be enough and some may take note of the graphic campaigns but for others it may take something more. Is the risk of killing or permanently injuring someone (or yourself or a loved one) enough to motivate you to change? Something needs to change.

In 2019, New South Wales, Australia, introduced a zero-tolerance policy change for drink driving. Under this new law first-time offenders with low range drink driving will immediately have their licence suspended for three months and incur an AUD\$561 fine; mid-range offenders are subject to licence disqualification and ignition interlock laws and high range offender's would incur immediate vehicle sanctions such as impound (8). Would a similar

policy be effective for changing driver behaviour and have a real impact on distracted driving? Are such radical measures necessary to make people stop and take note of the

dangers of being distracted while driving? Would such a sanction be tolerated? We want to avoid the motivator coming after the fact...when you've finally realised that being responsible for someone dying or sustaining permanent injuries from your bad decision was NOT AN ACCIDENT...it was and always will have been PREVENTABLE.

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## CARSP Member Receives International Award

CARSP member Dainius Dalmotas was named as the recipient of the Arnold W. Siegel International Transportation Safety Award for 2019. The presentation was made on April 9, 2019, at the awards ceremony held in conjunction with the Society of Automotive Engineers' World Congress Experience.

The Arnold W. Siegel International Transportation Safety Award recognizes individuals whose accomplishments include outstanding international research, innovation and contributions to crash injury protection, crash injury biomechanics and crash injury design for all mobility vehicles: land, air, sea and space. Recipients are in leadership positions who have made a significant transportation safety impact on their organization or on society worldwide.



*Dainius J. Dalmotas*

Dainius graduated from Sir George Williams University (Montreal, Canada) in 1972 with a Bachelor's degree in Mechanical Engineering. He then joined the Road Safety and Motor Vehicle Regulation Directorate of Transport Canada, where he occupied a variety of positions until his retirement from the federal government in 2005.

From 1998 to 2005, he was the Chief of Crashworthiness Research. As such, he was responsible for planning and managing contracted research in the areas of human biomechanics and vehicle crashworthiness, conducting in-house development and evaluation projects supporting regulatory initiatives addressing vehicle crashworthiness, and developing position papers on technical policy issues pertaining to automotive safety in Canada. While at Transport Canada, he conducted collaborative research efforts with a number of organizations, including the National Highway Traffic Safety Administration (NHTSA), the Insurance Institute for Highway Safety (IIHS), and the Australian Government. Dainius has produced numerous technical reports, and is the author of many scientific papers that have been published in the international literature. He has received several awards, including the US Government Award for Safety Engineering Excellence in 1996, and an Award of Excellence for An Outstanding Contribution to Transportation in Canada in 1997.

He has served on a number of committees under the International Organization for Standardization (ISO) and the International Harmonization of Research Activities (IHRA). His past memberships have included the Advisory Council for the Harvard Center for Risk Analysis, and NHTSA's Blue Ribbon Panel for the Evaluation of Advanced Airbags. He was also a Visiting Scholar at George Washington University, Washington, DC. Dainius is currently a member of the Advisory Board for the Stapp Car Crash Conference, and remains active as a consultant in the field of automotive safety research and crash testing.

In receiving the award, Dainius said: "My consulting firm's motto is, '*Safety is our passion --- analysis is our specialty*'. I feel fortunate to have been part of a great community of people

who are passionate about their work and truly believe in the importance of advancing opportunities for improvements in automotive safety.

Having started my career in automotive safety in the early seventies, I've had the unique opportunity to collaborate and to co-author papers with many of the distinguished pioneers in the field, including, for example, Priya Prasad, Ken Digges and Bud Mertz. These are people who have truly cared about the possibilities for improved safety that their work presented and their enthusiasm was contagious. At Transport Canada, the encouragement and support provided by my first manager, Eric Welbourne, my first Director General, Gordon Campbell, and subsequent DG's, particularly Chris Wilson and Nicole Pageot, helped propel my work. I also benefitted from the guidance of generous people outside Transport Canada, such as Michael Finkelstein and Joseph Kianthra. And I continue to be inspired by today's researchers, such as Randa Radwan, Becky Mueller, Raul Arbelaez, Alan German and Jean-Louis Comeau, who are enthusiastically advancing motor vehicle transportation safety.

The speed at which new automotive technologies, including safety technologies, are emerging and changing today is truly impressive. It is clearly an exciting time to be an automotive engineer.



Award Presentation: (L-R) Paul Mascarenas, SAE President, Dainius Dalmotas, Dan Hancock, SAE Past President



The Arnold W. Siegel International Transportation Safety Award

However, past experience suggests that successful changes will be brought about through evolutionary rather than revolutionary processes.

One thing I have learned in my career is how allowing for greater engagement by a wider community of expert stakeholders can enhance opportunities for safety initiatives. Progress typically arrives through incremental steps. One person or one organization may have a great breakthrough. And, if this is shared widely, it's just possible that someone else can build on this and apply it to another aspect of automotive safety. This is why it's so important that we transparently share our results, and why we should encourage more networking among key stakeholders.

Let's share the knowledge and spread the passion."

**D.J. Dalmotas Consulting, Inc.**  
Safety is our passion - analysis is our specialty

## Un membre de l'ACPSEER reçoit un prix international

Un membre de l'ACPSEER, Dainius Dalmotas, a reçu en 2019 le prix Arnold W. Siegel International Transportation Safety Award. La remise du prix a eu lieu le 9 avril 2019, lors d'une cérémonie organisée lors du Congrès mondial de la Society of Automotive Engineers (SAE).

Le Prix Arnold W. Siegel récompense les personnes ayant accompli des réalisations remarquables en recherche au niveau international, dans les domaines de l'innovation et de la prévention des accidents, en biomécanique des collisions et en conception sécuritaire des véhicules terrestres, aériens, maritimes et spatiaux. Les récipiendaires de ce prix sont des leaders, qui apportent une contribution exceptionnelle au monde de la sécurité routière, dans leur organisation ou à travers le monde.



*Dainius J. Dalmotas*

Dainius a obtenu son baccalauréat en génie mécanique de l'Université Sir George Williams (Montréal, Canada) en 1972. Il s'est ensuite joint à la Direction de la sécurité routière et de la réglementation automobile de Transports Canada, où il a occupé divers postes jusqu'à sa retraite du gouvernement fédéral, en 2005.

De 1998 à 2005, il a été chef de la recherche sur la résistance des véhicules aux chocs de collisions. À ce titre, il a été responsable de la planification et de la gestion de la recherche à contrat dans les domaines de la biomécanique humaine et de la résistance aux chocs des collisions, réalisant des projets de développement et d'évaluation internes pour appuyer les initiatives réglementaires en matière de résistance aux chocs des collisions. Il a été à l'origine de prises de position sur des politiques techniques relatives à la sécurité automobile à travers le Canada. Pour le compte de Transports Canada, il a réalisé des travaux de recherche collaborative avec un certain nombre d'organisations, dont la National Highway Traffic Safety Administration (NHTSA), l'Institut d'assurance pour la sécurité routière (IIHS) et le gouvernement australien.

Dainius a produit de nombreux rapports techniques et il est l'auteur de nombreux articles scientifiques. Il a reçu plusieurs prix, dont celui du gouvernement américain pour l'excellence en ingénierie de la sécurité, en 1996, ainsi que le prix d'excellence pour une contribution remarquable dans le secteur des transports au Canada, en 1997. Il a siégé sur plusieurs comités au sein de l'Organisation internationale de normalisation (ISO) et de l'harmonisation internationale des activités de recherche (IHRA). Il a été membre du conseil consultatif du Harvard Center for Risk Analysis et du groupe d'experts Blue Ribbon de la NHTSA, pour l'évaluation des coussins gonflables avancés. Il a également été chercheur invité à la George Washington University. Dainius est actuellement membre du comité consultatif de la conférence « Stapp Car Crash » et il demeure actif comme consultant, dans le domaine de la recherche sur la sécurité automobile et des essais de collision.

En recevant ce prix, Dainius a déclaré : « La devise de mon cabinet-conseil est la suivante : « La sécurité est notre passion, l'analyse est notre spécialité. » Je suis chanceux de faire partie d'une communauté aussi passionnée, qui croit à l'importance de faire progresser l'amélioration de la sécurité automobile.

Ayant débuté ma carrière dans le secteur de la sécurité automobile au début des années 70, j'ai eu l'occasion de collaborer et de co-écrire des articles avec de nombreux pionniers du domaine, notamment Priya Prasad, Ken Digges et Bud Mertz. Ces gens avaient le souci d'améliorer la sécurité routière et leur enthousiasme était contagieux. Chez Transports Canada, j'ai reçu l'encouragement et le soutien de mon premier directeur, Eric Welbourne, puis du directeur général Gordon Campbell, et ensuite des directeurs généraux successifs, en particulier Chris Wilson et Nicole Pageot, qui ont contribué à faire avancer mon travail de façon remarquable. J'ai aussi bénéficié des conseils de nombreuses personnes oeuvrant à l'extérieur de Transports Canada, telles que Michael Finkelstein et Joseph Kaniathra. Je continue à être inspiré par des chercheurs encore actifs, tels que Randa Radwan, Becky Mueller, Raul Arbelaez, Alan German et Jean-Louis Comeau, qui veulent toujours améliorer la sécurité des véhicules motorisés.



Award Presentation: (L-R) Paul Mascarenas, SAE President,  
Dainius Dalmotas, Dan Hancock, SAE Past President



The Arnold W. Siegel International  
Transportation Safety Award

Les nouvelles technologies, incluant les technologies de la sécurité des véhicules, évoluent à un rythme vraiment impressionnant. La période actuelle est vraiment passionnante pour un ingénieur automobile.

Mes expériences passées me démontrent toutefois que les changements fructueux sont apportés par des processus évolutifs, plutôt que révolutionnaires.

Une des choses que j'ai apprises au cours de ma carrière est que l'engagement d'une communauté plus large de décideurs augmente les chances de succès. Les progrès arrivent généralement de façon progressive. Ainsi, lorsqu'une personne ou une organisation réalise un bon coup, une belle avancée, c'est le partage de cette réussite à un large auditoire élargi qui fait en sorte que quelqu'un d'autre parvient à en tirer parti et à l'appliquer à un autre aspect de la sécurité automobile. Il est si important de partager nos résultats de manière transparente et d'encourager le réseautage entre acteurs du même milieu.

Partageons les connaissances et diffusons la passion. »

**D.J. Dalmotas Consulting, Inc.**  
Safety is our passion - analysis is our specialty

## Motorcycle and Bicycle Emergency Preparedness: One Safety Product, Three Benefits

By **Steve Reed**, President, Medical Data Carrier IM Inc.

*Steve Reed is the President and creator of Medical Data Carrier and holder of several patents world-wide. He is passionate about low cost - no tech, emergency preparedness for the individual while at work or at play. A graduate of the University of Alberta's Information Access and Privacy Program he currently calls Vancouver BC home.*

### Résumé

Le "Medical Data Carrier" est une solution universelle qui consiste en une mince pochette en vinyle sur laquelle sont apposés des informations contenant des données médicales et d'urgence. Elle peut être attachée à un casque avec un adhésif, avec une attache sur les sacs d'école, et même à des aides à la mobilité afin d'inclure une population plus large de citoyens vulnérables ciblés dans les campagnes de Vision Zéro. Alors que nous entamons une saison très occupée pour les cyclistes et les motocyclistes quant au de la route, il s'agit d'un moment opportun pour incorporer cette nouvelle initiative de sécurité lors de campagnes de sécurité et de sensibilisation. Cet article fournit plusieurs exemples de villes ayant adopté la solution "Medical Data Carrier".

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The Medical Data Carrier (MDC) is a no tech solution that consists of a thin vinyl sleeve with messaging on the exterior. It is affixed to the helmet with a safe adhesive. Inside there is a two-sided medical data form made from synthetic paper. The data fields on the form capture crucial medical and emergency information about the motorcycle rider, cyclist, the pedestrian holding the school bag, or the holder of the mobility aid.

The MDC delivers a three-pronged safety benefit: it is a visual reminder to the individual that the activity they are about to engage in has some risk; it encourages helmet use as one must have a helmet to utilize it; and it provides potentially life saving information to first responders should a collision occur.

The MDC fits right into the Vision Zero strategy. "It is always great to see cost-effective solutions to help make our community even safer," said Ottawa Mayor Jim Watson. Ottawa is not only Canada's fourth largest city, it is also one of the 10 most congested cities in the country. The number of cyclists and motocyclists sharing the city's streets and roadways is increasing dramatically each year as people turn to alternative modes of transportation. In 2014, Rob Wilkinson, Director of Safer Roads Ottawa started to provide vulnerable road users with the MDC.

Studies by Biker Down's Jim Sanderson, Crew Manager Road Safety Team Kent and Fire and Rescue Service UK, a national motorcycle training and first aid program run by U.K Fire and Rescue, who distributes MDC, have shown that the first responder on-scene at a powersports crash is usually a fellow rider or a Good Samaritan. The MDC, being affixed to the exterior of the rider's helmet, is very visible to non-professional first responders who can use this information to relay crucial medical information to inbound Emergency Medical Services (EMS). The difference in the quality of the patient information being relayed to 911 is significantly improved allowing EMS to arrive on the collision scene better prepared and with less chance for complications arising at time of treatment. This in turn may reduce the emotion and financial burden on all stakeholders including; family, friends, employers, EMS, insurers, and the community.

Experts agree that access to patient medical data is crucial for paramedics in the first few moments of a medical or trauma emergency. "The Medical Data Carrier products are simple and make this information readily available" stated Chris Hood, President of the Paramedic Association of Canada.

The Alberta Motorcycle Safety Association (AMSS) has created a custom branded MDC and is heavily promoting their innovative #ThinkBike campaign in conjunction with selling their MDC to raise funds to support their mandate to be the voice of motorcycle safety in Alberta. Chief Mark Neufeld, President of the Alberta Association of Chiefs of Police (AACP) wrote "the AACP is supportive of this initiative which can protect motorists and assist responders in those unfortunate cases where collisions have occurred. Information about the MDC program will be shared with all police services in Alberta and this will alert first responders regarding the MDC as a valuable source of medical information pertaining to the owner of the helmet." In approving the initiative, AACP members met regarding existing Alberta provincial legislation relating to stickers being prohibited on helmets and declared that no enforcement will result from an MDC being affixed to a helmet.

The cost-effective MDC is a universal solution supporting our vulnerable citizens targeted in Vision Zero campaigns. The customability of the MDC means that Vision Zero proponents can engage and activate their local business community to help support funding MDC based safety initiatives through strategic co branding on the product.

With a variety of pricing options and favoured rates to community based safety organizations the cost of one MDC is less than a cup of coffee.

With medication errors, adverse drug events can add 8-12 days of patient hospital stay (1) Considering that the average stay in a hospital bed in Windsor Ontario costs about \$1,200 a day and a stay in intensive care is more than triple that (2) one averted adverse drug event can save \$36,000 just in time in hospital. The ROI with Medical Data Carrier as an outright preventative safety initiative and as a EMS tool is very real and compelling.

As we enter into the busiest season for cyclists and motorcyclists to share the roads it is never too late to incorporate a new safety initiative into the mix of PSA's and safety campaign launches.

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## #SlowDownMoveOver

Sgt. Kerry Schmidt from the Ontario Provincial Police (OPP) Highway Safety Division took some time out of his busy day to have a conversation about the safety of police officers working in their 'office': the highways of Ontario.

### **What is the leading cause of vehicle collisions/crashes on Ontario roadways? How has this changed in the past decade?**

Unfortunately, there were 333 fatal crashes on OPP patrolled roadways in 2018. The OPP responds to approximately 70,000 crashes annually and the 'big four' causes are (i) distracted driving, (ii) impaired driving, (iii) aggressive driving and (iv) not using seat belts. A decade ago the causes were related to the last three, with distracted driving being added recently. The underlying issue across many of these crashes is driver inattention and that isn't restricted to cell phone use but includes drinking, eating, external distractions like billboards, and internal distractions like the radio and other people in the vehicle. Drivers need to be alert and attentive so they are able to respond, and many times very quickly, to changes in traffic. So, drivers need to actively pay attention to driving, leave enough distance between vehicles, use their mirrors, etc. Even with vehicle advancements, it still comes down to the driver having responsibility for the vehicle and in a manner that allows them to take control and avoid a collision.

### **What is your biggest concern, in terms of your own safety, when working on the side of the roadway?**

When responding to collisions or pulling over a vehicle, the biggest concern is being hit by another vehicle. When working on the roadway I need to take into consideration the highway conditions – is the area level, on a curve, how wide is the shoulder. I may drive behind a vehicle for some distance in order to find a place that is safe for both me and the driver. When stopped at the side of the highway, it's important to indicate to the passing traffic where there are vehicles using the emergency lights, especially the back lights with the directional arrow and the red, blue and amber lights. Other steps are to pull off the highway as far as possible, approach the stopped vehicle on the passenger side, if appropriate, but if I have to approach on the driver's side of the vehicle, I ensure I'm facing the oncoming traffic to watch for potential dangers. Sometime drivers see the flashing lights and drive towards them: night is more dangerous for this to happen.

Sgt. Schmidt recalled a recent incident in Southwestern Ontario where a police vehicle was hit by a transport truck as it was parked at the side of the highway. If an officer had been getting out of the vehicle at that time, they would have been killed.



## What safety strategies do you use to keep yourself and others safe?

There is little margin for error when working at the side of a roadway, especially a highway. A few strategies to illustrate how we address safety concerns are:

- Use blocker trucks. To protect more vulnerable vehicles, officers and first responders, these trucks create a crumple zone between traffic and the crash site and often have impact absorbing materials.
- Turn off forward facing lights. These are a distraction for oncoming traffic and in some cases drivers have driven directly into the stopped vehicles or the distraction causes secondary crashes.
- Being visible. Drivers need to be able to see officers and first responders so wearing high visibility clothing, like a safety vest, and using pylons and flares to notify drivers of a potential obstacle are essential.

The OPP are starting to train OPP officers, first responders and all emergency responders to being more aware on how to more effectively manage highway incidents to keep responders safe and keeping traffic moving more efficiently. The goal is for everyone to understand, when they arrive at a crash scene, things like where to position themselves and what their role is at the scene. This collaborative approach ensures that everyone is working together, safely.

## Has the #slowdownmoveover legislation and awareness impacted driver's behaviour?

There has been a concentrated effort to make drivers aware of the requirement through radio and television ads, and highway signs as reminders. I do see more compliance, especially drivers moving over, but I still don't see drivers slowing down as much as they should. Slowing down is the first action that should be taken, then move over, if possible. Slowing down gives driver's more reaction time. They may not see the danger, like a pedestrian in the roadway, a spill on the road that makes it slippery, until they are right on it, so slowing down early is essential.



## What do you love about your work?

I love interacting with people, being on the road, seeing what's happening in my community, and working with so many great people who share a common goal: getting people home safely. I want to share information with the media and the public when there are issues that need to be addressed to help them understand the complexities of what we deal with daily on the road, engage in discussions and even have debates. I think about all the people who are just trying to get somewhere and when crashes occur, so many people are impacted. So, when there is an issue affecting their ability to get where they want to go, and I can share information that helps them avoid an area or take a different route, I want to do that.



## Preferred Towing

Gary Vandenneuvel and his wife, Tammy, own and operate Preferred Towing in Sarnia, Ontario (<http://www.preferredtowing.com/home.html>). Their son, Collin, joined the family business and together with their team is "...a 24hr/7 day per week service provider who is capable of handling all of your heavy duty, medium duty and light duty towing; float service needs; as well as offering cross docking services on site". Gary and Collin are seen on Discovery Channel's Heavy Rescue 401 (Tammy is usually there but working behind the scenes). They shared insights into the towing profession for this article.



### How did you start in the towing business?

Gary trained as a mechanic and worked at his brother's shop. He found he enjoyed the towing part so transitioned into that, buying his own truck in 1991. Gary also worked at one of the local refineries and kept that job while he started out and built the business. At the end of six months, he had to buy a second tow truck, but continued working at the refinery for 10 years.

Collin has always had an interest in the industry, having grown up with it. There was never an expectation that he joined the business. He just "has a love for it".

Tammy oversees all of the business management operations including things like safety, office staff, and policies. She also goes out on calls to ensure the teams have supplies, food and water. She organizes staff and logistics, such as offloading the trailer at the accident scene and also works as a labourer on the recovery activities.

### What is your biggest concern, in terms of your own safety, when working on the side of the roadway?

"Personal safety is really paramount," Gary says, "and the concern of being struck on the side of the road". Collin echoed this concern, saying that, "working in between a live lane and the equipment with cars flying by is more dangerous than dealing with the wreck". Both Gary and Collin identified that drivers don't slow down or move over, and explain that unless drivers have experienced being at the side of a highway with vehicles passing at maximum speed, they can't imagine what it feels like.

"I worry about the unknown", Tammy says, "we are in control of the scene but there are so many other aspects in the environment we don't have control of like traffic that travels fast and close, or the condition of the truck being recovered."

### How has this changed in the past decade?

"Over time", Gary says, "traffic volumes have increased which puts more pressure on us to clear the roadway quickly". There is a big push through the legislation for drivers to 'slow down and move over' which used to just apply to police, fire, and ambulance but has been expanded to include tow trucks. He says, "it's a nice change but it will take time to see a real shift in driver behaviours". Collin agrees and notes that the crew creating Heavy Rescue 401

were surprised that, when the show started a few years ago, 'move over slow down' didn't apply to tow trucks.

"The equipment has become safer to use", Tammy says, "and increased Ministry policies offer protection for workers". Through the Heavy Rescue 401 TV show and education through new channels like social media, there is a new respect for the industry, the professional nature of those working in the field, and a better understanding of the complexities involved.

### **What safety strategies do you use to keep yourself and others safe?**

"The most important safety strategy is to allow the police, fire, ambulance to position themselves first on the scene and then position the tow trucks in front of them", says Gary, and he notes that "there needs to be enough space between people and the crash site and then our team and the recovery sites in order to deflect if anything goes wrong". He drives the point home, saying "I'm very clear with our team that our trucks never block the roadway without police – we are never on the paved portion of the road until that is in place". Pylons are also used extensively and all drivers are trained annually on placement of pylons to keep them safe. "Related to that", Gary says, "we use arrow lights on vehicles and wear reflective gear to make sure we can be seen by drivers but also each other".

Collin also spoke about the importance of positioning their trucks, noting that each job is different. "If we're doing a tire change, we position the truck behind to create an impact zone and separate us from the traffic. If we're picking up a vehicle, we use pylons/ cones, flashing lights, and wearing reflective vests. Weather plays a huge role in the risks faced at any job", says Collin, "but keeping your eyes and ears open, monitoring the traffic so you know what cars are coming and how far away they are, is essential".

In terms of training, Preferred Towing staff go through formal Wreckmaster training to get certified and then onsite practical, hands on training in a safe environment. "There they have the ability to make mistakes and learn by doing", says Tammy. Staff also spend time shadowing experienced team members and are assigned a 'buddy' who shows them how to (and not) do things, watches their work and provides coaching. Beyond this, through the industrial cooperative, staff take training in basic safety, WHMIS, transportation of hazardous goods, among other topics.

### **If there was one improvement related to roadside safety that you could make, what would it be?**

Gary and Collin were quick to answer this question: drivers slowing down and moving over, understanding how dangerous it is to be working at the side of the road and the seriousness of the potential consequences. "I'm not sure how best to achieve this", says Gary, "whether is it better signage indicating lane closures or higher fines or something else". He cites the example of Michigan, which is right across the border from Sarnia. In Michigan, if a driver kills a person who is working at the side of the road they face a \$5,000 minimum fine and/or 20 years in prison.

Collin had the opportunity to ride along with a tow truck professional in Holland from one of the largest companies in Netherlands. He observed road safety measures such as sign boards every 500 metres that can be easily changed to provide advanced notice to drivers of road conditions. "This means that drivers move over well before the crash site", Collin

says, “instead of coming up right on the crash site”. The trucks are also different, for example, flatbeds in Holland have different mechanisms that allow them to function as a flatbed but also have booms attached to assist with recoveries. Tammy agrees, saying that “I think we can learn a lot from Europe where they have improved systems”.

### **What do you love about your work?**

“Every day is different”, Gary says, “there is a challenge in every job; it’s like solving a puzzle, and there is a feeling of accomplishment at the end of the day - getting people home and keeping the highways open”. He goes on to say that the show, Heavy Rescue 401, is helping to explain the complexities of clearing the roadways, so drivers can understand why it sometimes takes so long to remove a wreck. “It’s been a great experience to contribute to that,” says Gary.

What was clear in speaking with Gary, Collin and Tammy is that they all have a passion for helping people and for contributing to the essential need for traffic to move on Ontario highways. They are consummate professionals that prioritize the safety of their team, illustrated by Tammy’s comment that, “we say good morning to everyone at the start of a day and want to be able to say goodnight to them at the end of the day”.



Photos : <http://www.preferredtowing.com/photos.html>

## BC's Cone Zone: Increasing safety for roadside workers

By Louise Yako, Program Director, Road Safety at Work

*Louise has extensive leadership experience in the transportation and safety sectors. She is a former Board member of WorkSafeBC and CEO of the BC Trucking Association.*

Cone Zone, British Columbia's ninth annual, multi-organizational, multi-media campaign to raise awareness about and encourage shared responsibility for the safety of British Columbia's roadside workers launched on May 13, 2019.

In 2018, two roadside workers died as a result of being hit by a motor vehicle and another 29 were injured and missed time from work. Between 2009 and 2018, 13 roadside workers were killed and 213 were injured under similar circumstances. Hundreds of roadside work zones will be set up across British Columbia this spring and summer, and every day, tens of thousands of British Columbians -- first responders, truck drivers, road builders, landscapers, flag people, tow truck operators, telecommunications and utility workers, municipal workers, security guards and more -- work alongside roadways.

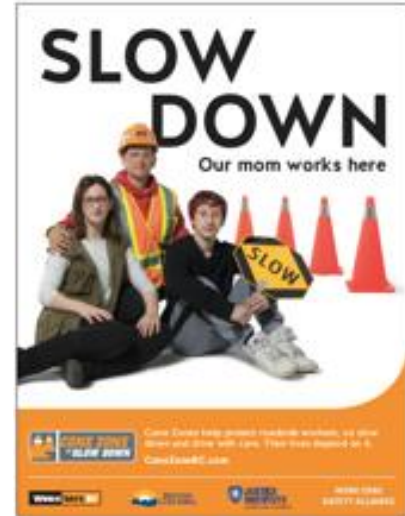


In an effort to reduce the number of injuries and deaths of roadside workers in British Columbia, a group of stakeholders — representing government, crown corporations, statutory agencies, and private organizations — came together to take action. The goal of this group, called the Work Zone Safety Alliance is to collaborate to improve safe driving behaviour and workplace safety practices in roadside work zones.

Today 20 organizations are members of the Alliance, each with a strong interest in improving roadside worker safety across the province. The Alliance is rolling out a growing, sophisticated, and targeted approach to raise awareness of the risks workers face in roadside work zones.

The keys to Cone Zone's success are the reach that it engenders through its partnership and stakeholder engagement, as well as its multi-media promotional campaign. Success of the campaign has stimulated more interest as more organizations request to participate each year.

The Cone Zone campaign relies on paid, earned (e.g., news coverage), and social media; a dedicated website ([ConeZoneBC.com](http://ConeZoneBC.com)); electronic highway message signs; employer and worker resource toolkits; and popular family events to deliver the message to Slow Down and Pay Attention around the ubiquitous orange cones typically used to mark roadside work zones. Ads and brochures rely on images of actual roadside workers with their sons and daughters. The messaging is from those children to the driving public reminding them, “My mommy/daddy works here.” This stark statement has been found to strongly resonate with the public whose recall of the ad is consistently high.



The key messages to drivers are to:

1. Slow down before reaching a Cone Zone and obey the posted speed limit.
2. When entering a roadside work zone pay attention and avoid distractions. Leave your phone alone.
3. Pay attention to temporary road signs, traffic cones and directions given by a traffic control person.
4. Plan ahead. *Listen to traffic reports before and during your drive – and where possible - adjust your route to avoid work zones.*
5. Respect the roadside as a workplace. Driving unsafely in a Cone Zone puts both you and roadside workers at risk. Orange cones are often the only things separating them from your vehicle.
6. Comply with the Motor Vehicle Act, and Slow Down and Move Over for any vehicle displaying flashing amber, red and blue lights. While they don't always display lights, this directive also applies when drivers see vehicles operated by landscapers, utility workers, garbage collectors, tow truck companies and others. If the posted speed limit is *greater* than 80 km/h, slow to 70km/h. If the posted speed is *less* than 80 km/h, slow to 40 km/h. In both situations, move over if it's safe to do so.

In addition to key messages for the public, the campaign emphasizes the concept of shared employer and worker responsibility for roadside safety. Employers' legal responsibility to ensure the health and safety of their workers and contractors extends to ensuring they understand the hazards related to working at the roadside and provide their workers (and contractors) with training, equipment, resources and supervision.



Similarly, roadside workers are expected to:

- Know how to identify hazards and assess risks,
- Follow safe work procedures as well as setup and take-down regulations,
- Wear appropriate high-visibility clothing, and
- Report unsafe conditions to their supervisor.

The mid-May campaign kicked off with a robust enforcement event involving a partnership of the RCMP Lower Mainland District Integrated Road Safety Unit, WorkSafeBC, and the Work Zone Safety Alliance. During the morning enforcement blitz at a roadside worksite, police were ticketing drivers for unsafe and illegal driving practices including using an electronic device, speeding, and disobeying a Traffic Control Person. It ends on August 31 to cover the most active road maintenance period of the year, which coincides with the heavy summer tourist and travel driving season.



*The RCMP Lower Mainland Integrated Road Safety Unit partnered with the Work Zone Safety Alliance and WorkSafeBC with an enforcement blitz at a Cone Zone in Burnaby.*

The Alliance gauges the campaign's effectiveness via a third-party research firm to measure advertising recall, perceived effectiveness of ads, as well as attitudes, perceptions and knowledge about safe driving practices around construction zones. The last survey in 2018 indicated an all-time high brand awareness, but alarming levels of distraction, with 68% of respondents admitting to moderate distractions at least weekly while driving. Of positive note, significantly more drivers surveyed believed they are fully responsible for the safety of roadside workers (22% to 30%) and are slowing down even when workers are not visible (59% to 64%).

### **About the Work Zone Safety Alliance**

Road Safety at Work is a WorkSafeBC-funded initiative managed by the Justice Institute of BC which aims to prevent workplace motor vehicle incidents in British Columbia by offering free online resources, courses, workshops, webinars and advisory services. The Cone Zone campaign is a joint provincial initiative supported by organizations committed to improving the safety of roadside workers. They are Ambulance Paramedics of B.C., Automotive Retailers Association, BCAA, B.C. Construction Safety Alliance, B.C. Flagging Association, B.C. Landscape and Nursery Association, B.C. Municipal Safety Association, B.C. Road Builders and Heavy Construction Association, City of Prince George, City of Surrey, Government of B.C., International Brotherhood of Electrical Workers Local 258, Insurance Corporation of B.C., Justice Institute of British Columbia, LiUNA Local 1611, RCMP, SafetyDriven, Telus, Lower Mainland police and WorkSafeBC.

## Qualitative Research Study: The Health Experiences of Long-Haul Truck Drivers

By Dr. Jennifer K. Johnson

*Dr. Jennifer K. Johnson earned her undergraduate degree in electrical engineering from Queen's University, her medical degree from McMaster University, and her Certification in Family Practice (CCFP) at the University of Calgary. In addition to caring for her family practice, Jennifer has been active as a hospital and emergency physician at the Georgian Bay General Hospital in Midland for the past 24 years. Jennifer is currently enrolled as a part time student to the Master of Clinical Science program at Western University.*

### Résumé

Le bien-être des conducteurs de poids lourds parcourant de longues distances est fortement influencé par l'environnement dans lequel ils travaillent. La nature sédentaire du travail et le fait de rester loin de chez soi pendant de longues périodes rendent difficile la réalisation et le maintien d'une bonne santé. Cette recherche qualitative a pour objectif de comprendre les expériences de santé des camionneurs "longues-distances" en Ontario selon leur point de vue. Au cours du processus d'analyse de ces entretiens, il est devenu évident que la santé des chauffeurs de poids lourds ne peut être réalisée que par la compréhension de leur travail. La contribution de ces chauffeurs et les efforts coordonnés de l'industrie du camionnage, du gouvernement, du système de santé et des autres usagers de la route sont nécessaires pour réduire les risques à la santé de ces chauffeurs dont notre économie est dépendante.

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### Background

The wellbeing of long-haul truck drivers is greatly influenced by the environment in which they work. Both the sedentary nature of truck driving and being away from home for extended periods of time make it difficult to achieve and maintain good health. Currently only 3% of truck drivers are women, but truck driving is the most common occupation for Canadian men, with more than 278,000 male transport truck drivers working in Canada.(1)

Long-haul truck drivers sit for the majority of their work, often exposed to full body vibration, which leads to musculoskeletal problems, especially low back pain.(2,3) They also experience sleep interruption and deprivation (4,5), get little exercise<sup>5</sup> and are limited to eating mostly poor diet options (6) when driving for extended periods. All these challenges contribute to driver obesity, and an increased prevalence of chronic diseases such as hypertension, diabetes, coronary heart disease, and sleep apnea in this profession.(7) These health problems are associated with an increased risk of truck crashes.(8) Constant fatigue sometimes leads to truck drivers' use of illegal stimulants such as methamphetamine and cocaine. These substances appear to further increase long-haul truck drivers' risk of crashes.(9)

Long periods of time away from social support, sharing the road with increasing numbers of vehicles, while constantly under time pressures to deliver, can affect the mental health of these drivers adversely.(10) At pickup and delivery stations, drivers have little control over the many unpaid hours they must wait.(11) This phenomenon creates pressure to drive more hours to make up for the income lost while waiting, which further adds to driver fatigue.(12) Long-haul truck drivers spend the majority of their time away, so it is challenging for them to access their primary medical provider in their home community for important health screening, health

promotion, and treatment. They also have difficulty accessing urgent medical care when sick or injured because of poor access to clinics and hospitals and little to no parking for large trucks.

Typically, this is a difficult population to study due to the fact that they travel long distances. The largest study of this population was conducted by the National Institute of Occupational Safety and Health in the United States in 2010 using surveys at truck stops in 48 states.(13)

#### *Study Goal and Data Collection Outline*

The research team of Dr. Amanda Terry, Dr. Evelyn Vingilis, and Dr. Jennifer Johnson are in the process of conducting a qualitative study, “The Work and Health Experiences of Long-Haul Truck Drivers” at Western University. The goal of this qualitative research study is to try to understand the health experiences of long-haul truck drivers in Ontario as described in their own words. The majority of participants in this study were recruited at a Highway 401 truck stop. Drivers of trucks with three or more axles, who reside in Ontario, and who had driven long-haul as their main occupation in the previous 12 months, were eligible for the study. In-depth semi-structured interviews were conducted with 13 long-haul truck drivers to explore their health and work experiences. The interviews were audio recorded, transcribed, and then analyzed by the study team for themes that emerged from the data.

#### *Preliminary Results*

Through the process of analysis of these in-depth interviews, it became clear the health of long-haul truck drivers can only be realized by understanding their work. Preliminary results from the study inform us that long-haul truck drivers are acutely aware of the danger of their job and live with the daily fear of causing injury or death to others or themselves when working. Trying to be safe has become more stressful for long-haul truck drivers with more cars and large commercial vehicles on the road. Long-haul truck drivers know their job makes them unhealthy and believe risky behaviours like smoking or taking stimulants are sometimes necessary to get loads delivered on time. The majority of participants in this study felt unable to properly self-manage their fatigue because they see government legislated hours of service as very rigid, dictating when they rest and when they drive.

Being away from family is a constant psychological strain for long-haul truck drivers, and the much needed social support of other long-haul truck drivers has eroded with recent changes to the trucking environment: truck driver schedules that vary daily, truck drivers not having control over the timing of rest breaks, the replacement of family-run truck stops and healthier sit-down meals with fast food, impersonal “en-route” type venues, stopping to help other truck drivers becoming more risky due to distrust of the party needing help, and the rapid assimilation of many new Canadians into trucking with different cultural practices and driving behaviours.

The interviewed long-haul truck drivers described often receiving disrespectful treatment from groups they encounter in their travels which further adds to their psychological stress. These groups include dispatchers, border guards, MTO inspectors, customers, security guards, drivers of other vehicles on the road, and the public at large.

Long-haul truck drivers clearly suffer a disproportionate burden of health problems and occupational risk compared to the rest of the working population.(14) The number of large commercial trucks on Canadian highways has increased by 44% in the last 10 years and may continue to increase with the transportation sector growth showing no signs of slowing



down.(15) As valuable members of the Canadian labour force, long-haul truck drivers deserve respectful treatment and fair working conditions. Improving the working environment for truck drivers is important because it will reduce the negative health impacts experienced by this group, and also improve public safety on highways. Input from these drivers and coordinated efforts from the trucking industry, government, the healthcare system, and the travelling public are needed to reduce the complex health risk of long-haul truck drivers on whom our economy is dependent.

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## Send Us Your Article

Want to be a published author? Have a synopsis of your current work or recently-completed project that could be included in the next issue of The Safety Network Newsletter? Articles on any aspect of road and motor vehicle safety are being requested for submission to the Editorial Board. Articles can be 300 to 1000 words plus accompanying photos and graphics.

Please send submissions to Pamela Fuselli, Chief Editor, [pfuselli@parachutecanada.org](mailto:pfuselli@parachutecanada.org).



## Envoyez-nous votre article

Voulez-vous être un auteur publié? Faites figurer dans le prochain numéro de The Safety Network Newsletter un synopsis de votre travail actuel ou de votre projet récemment terminé. Des articles sur tous les aspects de la sécurité des routes et des véhicules à moteur sont demandés pour être soumis au comité de rédaction. Des articles doit être d'une longueur de 300 à 1000 mots, plus les images et les graphiques qui l'accompagnent.

Veuillez envoyer vos soumissions à Pamela Fuselli, rédactrice en chef  
[pfuselli@parachutecanada.org](mailto:pfuselli@parachutecanada.org).

## Safety Network Newsletter (SNN) Editorial Committee Members

Each edition of the SNN will profile different members of the Editorial Committee. If you are interested in joining the SNN Editorial Committee, please contact Pamela Fuselli, Chief Editor at [pfuselli@parachutecanada.org](mailto:pfuselli@parachutecanada.org).

### Dr. Linda Rothman



Linda Rothman is a Senior Research Associate in Child Health Evaluative Sciences (CHES) at the Hospital for Sick Children. Dr. Linda Rothman trained and worked as a pediatric occupational therapist. After completing a Masters in Community Health at the University of Toronto, she worked for many years as an injury prevention research manager at Sickkids Hospital. She completed a PhD in 2014 at the Institute of Medical Science, U of T, followed by a postdoctoral fellowship in the School of Kinesiology and Health Science at York University in conjunction with CHES at Sickkids.

Her research is on unintentional childhood injury, with a focus on child pedestrian injury prevention related to school travel and the built environment. She strongly believes that children have the right to safe active transportation to school. Her research projects involve many partners including those from academia, hospitals, not-for-profit organizations, the private sector, school boards and all levels of the government. Dr. Rothman's research has been presented at many local, national and international conferences.

### James Fitzpatrick



James has worked in the field of car seat safety for the past 10 years as a technician, instructor, instructor trainer and consultant. James is the Canadian Compliance Engineer for Newell Brands in the baby division responsible for Graco and Baby Jogger products. In addition to ensuring all regulatory requirements are met, he runs annual testing programs on products and conducts product inspection for potential quality or safety issues.

James has been invited to speak at many events regarding car seat safety across Canada and has hosted training sessions and seminars for new parents and technicians. He has been a contributing author to the Canadian technician training programs and has created tests and updates for both technicians and instructor candidates. James has trained a number of Canadian manufacturers on car seat safety in addition to both running and participating in numerous car seat safety clinics and education events in the Greater Toronto Area. James sits on the board of both the Hamilton and Halton Region car seat committees.

## Acknowledgements

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