1SSUE / REVUE

JUNE 2020



The Safety Network Le Réseau-Sécurité



this issue	cette revue
11119 19906	しょししょ トレックスし

Editorial	P.1	Éditorial	P.1
Coronavirus Disease 2019: What Effect Could it Have on Road Safety in Canada?	P.2	2019 Maladie du coronavirus. Quel effet cela pourrait-il Avoir sur la sécurité routière au Canada ?	P.2
Aging Drivers and the Personal Automobile: Considerations for the Road Ahead	P.6	Les conducteurs vieillissants et l'automobile personnelle : considérations pour l'avenir	P.6
The Impact of Covid-19 on Road Safety and Design: A Summary of Parachute's Digital Panel Series	P.10	L'impact de Covid-19 sur la conception et sécurité routière: un résumé du panneau numérique de Parachute	P.10
Road Safety Must be Everyone's Choice	P 13	La sécurité routière doit être le choix de tous	P. 13



Photo and Cover image credit: Sanjin Avdičević

Editorial

In March of this year, a global pandemic was declared and boy, what a strange three and a half months it has been. Our streets were barely recognizable. The impacts have been at a scale not experienced since September 11, 2001.

Just when you thought you'd seen it all, we've been witnesses to things never before imagined. Here are just a few:

- Your daily commute to work was either eliminated or drastically reduced
- Quarantining and lock downs
- Increases in speeding and stunting
- Record-breaking drops in carbon emissions

We've seen not only *how much* things can change but *how quickly* they can change.

This quarter's journal examines changes in driver behaviour during the pandemic, how global policies have, literally, 'hit the streets'; six panelists discussing the impacts of the pandemic on our cities and their transportation networks, and discussion of the safe mobility of Canada's rapidly aging population.

Finally, this issue includes a personal contribution from Kylee Bowman, daughter of Karen Bowman, CARSP editorial board member. Kylee shares a unique perspective and art work on road safety from her experience with a collision at age 8. Thank you for sharing with us Kylee!

Chris Poirier, P.L.(Eng.), RSP₁ Chief Editor

Éditorial

En mars de cette année, une pandémie mondiale a été déclarée et, quelle période étrange cela a été. Nos rues étaient à peine reconnaissables. Les impacts ont été à une échelle non connue depuis le 11 septembre 2001.

Juste au moment où vous pensiez avoir tout vu, nous avons été témoins de choses jamais imaginées auparavant. Voici quelques exemples:

- Votre trajet quotidien au travail a été soit complètement éliminé, soit considérablement réduit
- Mise en quarantaine et verrouillage
- Des augmentations dans la vitesse et la conduite dangereuse
- Une baisse significative des émissions de carbone

Nous avons vu non seulement à quel point les choses peuvent changer, mais à quelle vitesse elles peuvent changer.

Le journal de ce trimestre examine les changements dans le comportement des conducteurs pendant la pandémie, comment les politiques mondiales ont littéralement « frappé les rues »; six panélistes discutent des répercussions de la pandémie sur nos villes et leurs réseaux de transport, et des discussions de la mobilité sécuritaire de la population canadienne qui vieillit rapidement.

Enfin, cette revue comprend une contribution personnelle de Kylee Bowman, fille de Karen Bowman, membre du comité de rédaction de CARSP. Kylee partage une perspective unique et un travail artistique sur la sécurité routière à partir de son expérience avec une collision à l'âge de 8 ans. Merci de partager avec nous Kylee!

Chris Poirier, L.P. (ing.), PSR₁ Rédacteur en chef



Coronavirus Disease 2019: What Effect Could it Have on Road Safety in Canada?

Abstract

In March 2020, the World Health Organization declared COVID-19 a world-wide pandemic and one result has been a major economic downturn. This downturn should reduce road collisions. However, research suggests economic downturns differentially affect driver behaviours. Using an interactionist model, we consider some potential positive and negative COVID-19 effects on traffic safety.

Résumé

En mars 2020, l'Organisation mondiale de la santé a déclaré le COVID-19 une pandémie mondiale et l'un des résultats a été un ralentissement économique majeur. Ce ralentissement devrait réduire les collisions routières. Cependant, la recherche suggère que les ralentissements économiques affectent différemment les comportements des conducteurs. En utilisant un modèle interactionniste, nous considérons certains effets potentiels positifs et négatifs du COVID-19 sur la sécurité routière.

Introduction

In March 2020, the World Health Organization declared COVID-19 a world-wide pandemic with 216 jurisdictions showing over 4 million cases and over 300,000 deaths combined as of May 15, 2020 (1).

A series of public health measures were put in place in Canada by the federal government to try to contain and reduce the spread of COVID-19. These measures included a range of physical distancing policies, such as closing educational institutions, restaurants, bars, retail and other non-essential businesses, banning public events, closing international and some provincial borders, discouraging travel and encouraging or requiring working from and staying at home (2,3). These physical distancing policies have had major economic effects (4). Moreover, provincially imposed voluntary and mandatory self-quarantine measures have

further reduced economic activity, as has the associated high Canadian unemployment level of 9.2% as of May 8, 2020 (5,6). Since this pandemic has created an economic downturn and self-quarantine, one would anticipate changes in road travel and road safety.

COVID-19 and Road Safety

The question for road safety professionals is what effects could COVID-19 have on road safety in Canada and beyond? The corollary to this question is what research questions should we be asking now and after the pandemic subsides? The remainder of this article will consider these questions.

Historically, economic downturns have been associated with reductions in road fatalities, although substantive variation in trends has also been found among countries and across time periods (7-12). Some studies have found



exposure measures, such as vehicle kilometre travelled (VKT), to be main predictors of road fatality reductions (13,14). However, other studies have shown that economic downturns differentially affected driver behaviours. For example, Maheshri and Winston (15), examining the effects of the 2008 recession in Ohio, found that a one percentage point increase in unemployment caused no more than a 0.15 VKT decrease. Yet "risky" drivers (drivers who experienced a collision during the study period, were over 60 years of age, drove older vehicles) reduced their VKT while collision-free drivers, younger cohorts and drivers of newer vehicles increased their VKT as the unemployment rate in their county increased.

These variations in effects and trends may be reflective of differential effects of situations on road users and how they interact with the environment. The interactionist model (16) that examines both the person and situation may be a useful framework by which to consider some COVID-19 pandemic effects on traffic safety.

Person Factors

High risk and/or vulnerable groups: Recent news items have suggested that speeding/stunt driving, a behaviour common among young males (17,18), has been occurring during the pandemic (19-23) as have speeding-related collisions (24,25). Indeed, there has been a 22% increase in fatalities on OPP patrolled roadways in Ottawa and eastern Ontario thus far this year (26). Numerous social media video posts with titles such as "COVID-19 Cash Days", "BUSTED for STREET RACING during Quarantine", "Covid can't shut this down!", "Social Distancing Tournament", "COVID-19 INFECTS the streets", showing street racing and stunt driving, have been uploaded and received thousands of views.



The problem may involve a greater proportion of road users speeding due to less congestion on roadways. Moreover, during the pandemic, speeding violations may involve greater speeds causing greater injury severity in resulting collisions.

On the other end of the spectrum, older adults may be following physical distancing recommendations more rigidly since persons over 60 years of age have a much higher COVID-19 infection fatality ratio (4.5%) than those under 60 (1.4%) (27); hence, older adults may be driving less which could reduce their driving-related casualty rates during the pandemic.

Another change related to the pandemic is increased substance use. A recent survey conducted by the Canadian Centre on Substance Use and Addiction (28) found that 25% of surveyed adults reported drinking more alcohol and 6% reported using more cannabis, with 14% of 18-34 years reporting increased cannabis use during the pandemic.

Will the increase in alcohol and cannabis use, and consumption during weekdays and daytime hours, continue and increase the prevalence of impaired drivers on the road?

Other vulnerable groups to examine are pedestrians and long-haul truck drivers. With gyms closed but walking encouraged, the rate of pedestrian injuries may increase because of more pedestrians; additionally, physical distancing on sidewalks may lead to walking on roadways, and clear roads offer an unparalleled opportunity for drivers to speed.

Truck drivers are also experiencing significant changes to their work that may be affecting their health and safety with fewer but faster driving vehicles on the roads and many roadside food, rest and amenity venues closed (29).

The initial, large demand on long-haul truck drivers to restock goods at the beginning of the pandemic has been followed by unpredictable load demands due to slowing of the economy.

Given these person factor observations, it would be critical to examine not only overall collision and casualty and moving violation trends before, during and after the pandemic but also trends by different ages and subgroups.



Situation factors

Social distancing has made public transit a challenge; hence those who need to travel may be more likely to use their vehicles.

When the pandemic is over, will the public be ready to use public transit, or will they remain in their vehicles, thereby increasing traffic density and congestion?

How will traffic congestion affect road user behaviour after the pandemic (30)? With truck drivers experiencing economic uncertainty, they might wish to "make up for lost time" once restrictions are lifted. How will increasing congestion interact with their likely desire to catch up?

Similarly, for all drivers, especially those who continued commuting but have faced very little congestion during COVID-19, how will they deal with the "new" annoyance of returning congestion? If people are driving, are they on their phones more to stay socially connected with family and friends?

Additionally, has there been a reduction in traffic enforcement as police officers have become ill and as business break-ins, domestic incidents and other crimes have increased (21)?

Finally, given the billions that governments are devoting to fighting the pandemic, will there be any funds left to address road safety issues?



Conclusion

In summary, this natural experiment could have many different effects on traffic safety both during and after the pandemic. Our job, as road safety professionals will be to examine and understand the effects.

By Dr. Evelyn Vingilis, PhD, C. Psych.

Dr. Vingilis is Director of the Population and Community Health Unit, and Professor in the Departments of Family Medicine, and Epidemiology and Biostatistics, Schulich School of Medicine and Dentistry, Western University, London, Ontario. Evelyn is the team leader for this research project. She has been conducting road safety research for 42 years, has been a CARSP board member and, in 2018, received CARSP's Lifetime Achievement Award.

Authors' Affiliations

Doug Beirness, PhD, Senior Research Associate, Canadian Centre on Substance Use and Addiction, Ottawa, Ontario.

Paul Boase, MA, Chief, Road Users, Motor Vehicle Safety, Transport Canada

Patrick Byrne, PhD, Team Leader, Special Projects, Research and Evaluation Office, Ontario Ministry of Transportation

Jennifer Johnson, MD, MCISc, Bayside Medical Centre, Penetanguishene, Ontario

Brian Jonah, PhD, Road Safety Canada Consulting, Ottawa, Ontario

Robert E. Mann, PhD, Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, Ontario; Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario

Mark J. Rapoport, MD, FRCPC, Professor, Department of Psychiatry, Faculty of Medicine, University of Toronto, Staff Psychiatrist, Sunnybrook Health Sciences Centre.

Jane Seeley, BA, Project Coordinator, Population and Community Health Unit, Department of Family Medicine Schulich School of Medicine and Dentistry, Western University, London, Ontario

Christine Wickens, PhD, Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, Ontario; Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario

David Wiesenthal, PhD, Professor Emeritus and Senior Scholar, Department of Psychology, York University, Toronto, Ontario



References

- World Health Organization (WHO). Coronavirus disease (COVID-19) pandemic. May 15, 2020. https://www.who.int/emergencies/diseases/novel-coronavirus-2019
- De Vos J. The effect of COVID-19 and subsequent social distancing on travel behavior. Transportation Research Interdisciplinary Perspectives. 2020 Apr 24:100121.
- Government of Canada. Physical distancing: Actions for reducing the spread of COVID-19. 2020. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/physical-distancing.html
- Beckman K. April 9, 2020 U.S. and Global Economies Slammed by COVID-19: U.S. and World Outlooks Issue Briefing. The Conference Board of Canada, https://www.conferenceboard.ca/elibrary/abstract.aspx?did=10686
- Statistics Canada. Labour Force Survey April 2020. 2020 May 8a https://www150.statcan.gc.ca/n1/daily-guotidien/200508/dg200508a-eng.htm
- Statistics Canada. Labour Market Indicators. 2020 May 8b https://www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2017002-eng.htm
- Antoniou C, Yannis G, Papadimitriou E, Lassarre S. Relating traffic fatalities to GDP in Europe on the long term. Accident Analysis & Prevention. 2016 Jul 1;92:89-96.
- He MM. Driving through the Great Recession: Why does motor vehicle fatality decrease when the economy slows down? Social Science & Medicine. 2016 Apr 1;155:1-1.
- Lamm R, Choueiri EM, Kloeckner JH. Accidents in the US and Europe: 1970–1980. Accident Analysis & Prevention. 1985 Jan 1;17(6):429-38.
- Wagenaar AC. Effects of macroeconomic conditions on the incidence of motor vehicle accidents. Accident Analysis & Prevention. 1984 Jun 1;16(3):191-205.
- 11. Wegman F, Allsop R, Antoniou C, Bergel-Hayat R, Elvik R, Lassarre S, Lloyd D, Wijnen W. How did the economic recession (2008–2010) influence traffic fatalities in OECD-countries? Accident Analysis & Prevention. 2017 May 1;102:51-9
- 12. Yannis G, Papadimitriou E, Folla K. Effect of GDP changes on road traffic fatalities. Safety science. 2014 Mar 1:63:42-9
- 13. Kopelias P, Misokefalou E, Tsantsanoglou A. Evaluation of road safety level during a recession period: a comparison using safety and economic factors. Advances in Transportation Studies. 2016 Apr 1(38).
- 14. Lloyd L, Wallbank C, Broughton J. A collection of evidence for the impact of the economic recession on road fatalities in Great Britain. Accident Analysis & Prevention. 2015 Jul 1;80:274-85.
- Maheshri V, Winston C. Did the Great Recession keep bad drivers off the road? Journal of Risk and Uncertainty. 2016 Jun 1;52(3):255-80.
- Vingilis ER, Mann RE. Towards an interactionist approach to drinking—driving behaviour: implications for prevention and research. Health Education Research. 1986 Dec 1;1(4):273-88.
- 17. Vingilis E, Seeley J, Wiesenthal D, Mann R, Vingilis-Jaremko L, Vanlaar W, Leal N. Street racing and stunt driving in Ontario, Canada: Results of a web-based survey of car and racing enthusiasts. Transportation Research Part F: Traffic Psychology and Behaviour. 2013 Nov 1;21:30-42.

- Wiesenthal, D. L. & Singhal, D. Evolutionary psychology, demography and driver safety research: A theoretical synthesis. In C. Roberts (Ed.), Applied Evolutionary Psychology, 2012, pp. 399–413, Oxford, UK: Oxford University Press.
- Bellon T. As coronavirus empties streets, speeders hit the gas. 2020 April 15. https://www.thechronicleherald.ca/news/world/as-coronavirus-empties-streets-speeders-hit-the-gas-437684/
- City News. OPP begin road safety blitz as fatal collisions on the rise. 2020 May 12. https://toronto.citynews.ca/2020/05/12/opp-road-safety-blitz/
- Fitzpatrick M. Crime data during COVID-19 shows spike in business break-ins, stunt driving. CBC News. 2020 April 22. https://www.cbc.ca/news/canada/crime-data-during-covid-19-shows-spike-in-business-break-ins-stunt-driving-1.5539331
- O'Neil L. Police catch 19-year-old Mercedes driver speeding at 308 km/h on the QEW. BlogTO. 2020 May 10. https://www.blogto.com/city/2020/05/ontario-police-19-year-old-speeding-308-qew/
- Zadorsky J. OPP report more cases of racing on Highway 401, including 3 at once. CTV News London. 2020 April 28. https://london.ctvnews.ca/opp-report-more-cases-of-racing-on-highway-401-including-3-at-once-1.4914759
- Paparella N. Stunt driving increases with quieter streets during COVID-19 outbreak. CTV News London. 2020 April 22. https://london.ctvnews.ca/stunt-driving-increases-with-quieter-streets-during-covid-19-outbreak-1.4907693
- Thompson M. St. Thomas man charged after crash during alleged street racing incident. CTV News London. 2020 May 10. https://london.ctvnews.ca/st-thomas-man-charged-after-crash-during-alleged-street-racing-incident-1.4932966?cache=%3FautoPlay%3Dtrue
- Pringle J. Fatal collisions up 22 per cent on Eastern Ontario roads in 2020: OPP. CTV News. 2020 May 12th https://www.iheartradio.ca/580-cfra/news/fatalcollisions-up-22-per-cent-on-eastern-ontario-roads-in-2020-opp-1.12398078
- Verity R, Okell LC, Dorigatti I, Winskill P, Whittaker C, Imai N, Cuomo-Dannenburg G, Thompson H, Walker PG, Fu H, Dighe A. Estimates of the severity of coronavirus disease 2019: a model-based analysis. The Lancet Infectious Diseases. 2020 Mar 30. 2020 https://doi.org/10.1016/S1473-3099(20)30243-7
- Canadian Centre on Substance Use and Addiction. COVID-19 and Increased Alcohol Consumption: NANOS Poll Summary Report. CCSA March Omni Summary Report. Submission 2020-1621, 2020 April.
- Reynolds C. Rest stops barring washroom access to truckers a 'huge problem' as virus spreads. The Canadian Press. 2020 March 30.
- Li G, Lai W, Sui X, Li X, Qu X, Zhang T, Li Y. Influence of traffic congestion on driver behavior in postcongestion driving. Accident Analysis & Prevention. 2020 Jun 1;141:105508





Ruheena Sangrar (right) with Larry Swinn, an older driver advisor, who helped with designing the study protocol used to examine our older driver training approach (Photo credit: McMaster University)

Aging Drivers and the Personal Automobile: Considerations for the Road Ahead

Abstract

The importance of having access to safe and viable transportation to meet one's personal needs has intensified due to social restrictions imposed by the current pandemic. While home delivery of certain items is possible, not all individuals can access such services. In the current context, the private automobile remains one of the most viable means of community mobility, particularly for older Canadians, who are at a higher risk if they contract COVID-19. Unfortunately, drivers aged 70+ also have the highest risk of being injured or killed when in a motor vehicle collision. Occupational Therapists, among other healthcare providers, often become involved in transportation-related issues when medical fitness-to-drive is questioned. However, there is an opportunity to initiate conversations with older adults about their driving and community mobility earlier than when major concerns arise in their behind-the-wheel abilities. Our research team combined best-evidence with the perspectives of older drivers and other key informants to design and evaluate an older driver training approach that uses video recordings to provide tailored feedback. Such innovative approaches are needed to support the safe mobility of Canada's rapidly aging population.



Résumé

L'importance d'avoir accès à des moyens de transport sûrs et viables pour répondre à ses besoins personnels s'est intensifiée en raison des restrictions sociales imposées par la pandémie actuelle. Bien que la livraison à domicile de certains articles soit possible, toutes les personnes ne peuvent pas accéder à ces services. Dans le contexte actuel, l'automobile privée demeure l'un des moyens de mobilité communautaire les plus viables, en particulier pour les Canadiens plus âgés, qui courent un risque plus élevé s'ils contractent COVID-19. Malheureusement, les conducteurs âgés de 70 ans et plus courent également le plus grand risque d'être blessés ou tués lors d'une collision automobile. Les ergothérapeutes, parmi d'autres fournisseurs de soins de santé, sont souvent impliqués dans des problèmes liés au transport lorsque l'aptitude médicale à conduire est remise en question. Cependant, il est possible d'entamer des conversations avec des personnes âgées au sujet de leur conduite et de la mobilité communautaire plus tôt que lorsque des problèmes majeurs surviennent au sujet de leurs capacités au volant. Notre équipe de recherche a combiné les meilleures données probantes avec les points de vue des conducteurs âgés et d'autres informateurs clés pour concevoir et évaluer une approche de formation des conducteurs âgés qui utilise des enregistrements vidéo pour fournir des commentaires personnalisés. De telles approches novatrices sont nécessaires pour soutenir la mobilité sécuritaire de la population vieillissante du Canada.

Over the past few months, our world has dramatically changed due to COVID-19. This pandemic has impacted many areas of daily life, including transportation.

Our research team would like to first and foremost take this opportunity to thank first responders, the trucking industry, transit workers, cashiers and clerks, our healthcare colleagues, and countless others on the frontline who are helping Canadians get through this crisis and keep our economy moving. Not surprisingly, federal and provincial governments have recognized those within the transportation sector as essential workers – we are especially grateful to these individuals and their families.

To date, over 90% of those who have died in Canada from COVID-19 are aged 60+.[1] Although many of these individuals lived in long-term care facilities, 92% of older Canadians are community-dwelling.[2] All Canadians, including older adults, have been told to stay close to home and avoid non-essential travel with some exceptions, such as groceries, pharmacies, and medical appointments. Given what is known about how this virus can spread person-toperson, the private automobile remains one of the most viable and safest means of community travel for our aging population. Hence, it is critical to consider innovative ways to support their driving safety. In this article, we outline the

rationale for our research study focused on the development and evaluation an older driver training program. This study was under development prior to the current pandemic. This research is discussed in the context of ongoing efforts to promote the safe mobility of older Canadians.

The number of Canadians aged 65+ is growing. When involved in a motor vehicle collision, drivers in this age group have a higher risk of fatality and serious injury.

In North America, seniors are the fastest growing demographic of the driving population due, in part, to the aging of the generation known as the baby boomers. Unfortunately, this demographic is more likely to be killed or seriously injured in a motor vehicle collision (MVC) beginning at age 70 and escalating thereafter. [3] To date, much research on older drivers has focused on identifying those who present the highest medical risk when behind-thewheel.

Healthcare professionals, such as Occupational Therapists (OTs), are often the first to recognize when medical changes might impact one's fitness-to-drive. In many jurisdictions, healthcare professionals have a legal and professional obligation to report drivers to the transportation authority if they suspect a medical change could impact a persons' behind-the-wheel abilities.



could impact a persons' behind-the-wheel abilities. For example, in Ontario, OTs are the most recent profession to be afforded discretionary authority to report clients with functional impairment that could impair their ability to operate a motor vehicle to the Ministry of Transportation. In addition to identifying potentially medically at-risk drivers, healthcare professionals also have a critical role to play with supporting community mobility. Almost 10 years ago, a joint editorial published in the Canadian Medical Association Journal (CMAJ) implored physicians and other clinicians to create "programs to help seniors drive safely for as long as possible and, when they can't, to help them get around." [4] However, until appropriate public transportation and other alternatives are readily available, many older Canadians will want and ne ed to drive. Hence, developing interventions that keep them safe behind-the-wheel for as long as possible is necessary.

Using the lens of Occupational Therapy and road safety, the aim of our program of research is to support the driving and community mobility of older Canadians.

In our frontline clinical work with the aging population, OTs are trained to assess where the impact of a medical condition, alongside many other factors, can affect one's behind-the-wheel skills. As such, OTs are well-positioned to initiate a conversation with older adults about perceived changes in their driving behaviour with increasing age or worsening health, and/or their ability to access alternate modes of transportation when necessary.

However, discussing driving capacity in later life is a sensitive topic and raising this topic can be challenging for OTs. These conversations can be especially difficult when

older adults have not thought about how they will access their community if driving is no longer an option. Hence, interventions aimed at the growing demographic of aging drivers who do not yet have functional deficits that impair their behind-the-wheel abilities are warranted. By understanding and integrating the perspectives of this demographic, programs that support their driving and community mobility can be better designed to address their needs and preferences.

Our research team systematically reviewed the best available evidence and sought direct input from seniors, driving instructors, as well as healthcare professionals, to inform the development of an older driver training program.

Training older adults to improve their behind-the-wheel abilities has been identified as a viable strategy to extend their years of safe driving. With a growing number of studies on older driver training, our first step as a research team was to systematically review this evidence. Our published review [5] found tailoring training to the older driver in question was an effective strategy, and that use of video recordings of their actual driving to provide behind-the-wheel feedback was also promising. In addition to our systematic review, we conducted focus groups with seniors alongside interviews with OTs and driving instructors to identify factors that can influence an older driver's willingness to participate in such training. Using best evidence and our qualitative findings, our research team has designed the 'Refreshing Older Adults Driving Skills' (ROADSkills) program. This training uses customized video feedback to improve the behind-thewheel performance of community-dwelling seniors.

Brenda Vrkljan and Ruheena Sangrar (sitting) holding the in-vehicle cameras that video-recorded the behind-the-wheel abilities of older drivers in the ROADSkills study. (Photo credit: John Rennison, The Hamilton Spectator)





Preliminary results from our randomized controlled trial suggest the ROADSkills program can have a positive impact on their driving abilities. An 8-month follow-up study to determine the longer-term impact of such training on older drivers has also been completed and analyses from our follow-up are currently underway.

From our systematic review on older driver training, the most effective interventions were those that were multidisciplinary in nature. Let's work together to support the safe mobility of older Canadians.

Findings from our systemic review of evidence [5] indicated older driver training that involved multiple stakeholders in the design and delivery of the program were more effective. Examples of such stakeholders include researchers with different backgrounds (e.g., cognitive psychology, geriatrics, OT), driving educators and instructors, as well as policymakers. We must work together to develop innovative approaches that can improve the mobility of older Canadians. The current article outlined one such approach that has been undertaken to address their driving needs. Identifying who might benefit most from older driver training programs and pragmatic considerations for the delivery of such programs will be the focus of our ongoing research. For example, our team was recently funded by Women's College Hospital (Toronto, Canada) to more closely examine the impact of the ROADSkills program with older female drivers, who have one of the highest risks of at-fault MVCs (3).

Our approach has been highlighted in a 3-minute video at https://macdrop.mcmaster.ca/s/GmozmoM62LXJwsJ

created by our McMaster research trainees. Hence, there are many considerations when it comes to supporting driving and community mobility in older adulthood. The recent COVID-19 pandemic has further highlighted the vulnerability of our aging population and that access to a private automobile is almost essential.

Collaboration across road safety professionals as well as with older drivers and other key stakeholders, such as family members and healthcare professionals, is critical to ensure timely evidence-based strategies are put in place to support older Canadians' driving and community mobility now and in the future.

By: Ruheena Sangrar, PhD, O.T. Reg. (Ont.) & Brenda Vrkljan, PhD, O.T. Reg. (Ont.) School of Rehabilitation Science, McMaster University

Ruheena Sangrar is an Occupational Therapist and researcher interested in interdisciplinary research, education, and practice, with a focus on the mobility of older adults. She completed her PhD at McMaster University in March 2020.

Brenda Vrkljan is a Professor in the Occupational Therapy program at McMaster University where her research focuses on aging, medical risk, driving and community mobility. She is an executive member of the McMaster Institute for Research on Aging (MIRA)

Acknowledgements: We are grateful to our research participants, partners at Young Drivers of Canada ®, and student trainees. We received funding from the Labarge Optimal Aging Initiative (McMaster University, Hamilton, ON) and the 15K Women's Xchange Challenge, Women's College Hospital (Toronto, Canada).

References

- The Canadian Press. April 14, 2020. More than 90% of Canadian deaths from coronavirus are those over age 60. Retrieved from: https://toronto.citynews.ca/2020/04/14/canadian-deaths-age-coronavirus-covid19/
- Statistics Canada. 2011. Living arrangement of seniors. Catalogue no. 98-312-X2011003. Retrieved from https://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-312-x/98-312-x2011003_4-eng.cfm
- Regev, S., Rolison, J. J., & Moutari, S. 2018. Crash risk by driver age, gender, and time of day using a new exposure methodology. Journal of safety research, 66, 131-140.
- MacDonald, N. & Hébert, P. C. 2010. Driving retirement programs for seniors: long overdue. Canadian medical association journal, 182(7), 645.
- Sangrar, R., Mun, J., Cammarata, M., Griffith, L., Letts, L., & Vrkljan, B. 2019. Older driver training programs: A systematic review of evidence aimed at improving behind-the-wheel performance. Journal of safety research, 71, 295-313.





Panelists from left to right, top to bottom: Brent Toderian, Bartek Komorowski, Linda Rothman, Rachel MacCleery, Craig Milligan and Robin Mazumder

The Impact of Covid-19 on Road Safety and Design: A Summary of Parachute's Digital Panel Series

Abstract

Since the COVID-19 pandemic was first declared in March 2020, workplaces and public spaces were quickly closed and people ventured out only for essential trips and exercise. As a result, there have been many fewer vehicles on the roads and more people walking and cycling while maintaining social distance. This resulted in an immediate call for Canadian cities to shift their road usage to accommodate these new needs. Now, as cities begin lifting restrictions, we are faced with deciding how to build back better, especially in regard to road safety and design.

In response to this pressing issue, Parachute organized two digital panels exploring the impact of COVID-19 on road safety and design in conversation with various experts. The panels, moderated by Parachute's Pamela Fuselli, explored the immediate responses various Canadian and international cities have made to make space for social distancing and increased active transportation during the pandemic, and what the next steps could look like in order to make these changes more permanent.

Résumé

Depuis que la pandémie de COVID-19 a été déclarée pour la première fois en mars 2020, les lieux de travail et les espaces publics ont été rapidement fermés et les gens ne se sont aventurés que pour des voyages et des exercices essentiels. En conséquence, il y a eu beaucoup moins de véhicules sur les routes et plus de gens à pied et à vélo tout en maintenant la distance sociale. Il en est résulté un appel immédiat aux villes canadiennes pour qu'elles modifient leur utilisation des routes afin de répondre à ces nouveaux besoins. Maintenant, alors que les villes commencent à lever les restrictions, nous devons décider comment reconstruire mieux, en particulier en ce qui concerne la sécurité routière et la conception. En réponse à ce problème pressant, Parachute a organisé deux panneaux numériques explorant l'impact du COVID-19 sur la sécurité routière et la conception lors d'une conversation avec divers experts. Les panneaux, modérés par Pamela Fuselli de Parachute, ont exploré les réponses immédiates que diverses villes canadiennes et internationales ont apportées pour faire de la distance sociale et augmenter le transport actif pendant la pandémie, et à quoi pourraient ressembler les prochaines étapes afin de rendre ces changements plus permanents.





The first panel was held on May 8 and the focus was: "Thinking Differently, A look at Canadian cities' immediate response to COVID-19 to make space for social distancing." Panelists were Bartek Komorowski, urban planner and Planning Advisor for Road Safety and Human Behaviour at the Ville de Montréal; Linda Rothman, Assistant Professor at the School of Occupational and Public Health at Ryerson University in Toronto; and Brent Toderian, owner and consultant at Toderian Urbanworks and former Director of City Planning for the City of Vancouver.

When asked to reflect on various Canadian cities' immediate response to COVID-19 and the need for public space reallocation for social distancing, there were mixed responses. Cities such as Toronto and Ottawa were given a low grade for their slow response to immediately reallocating road space for pedestrians and cyclists. Cities such as Calgary, Winnipeg, Vancouver and Montreal, however, were praised for their quicker response to enacting temporary changes such as shutting down roadways to vehicles and enforcing slow streets (closing roads to non-local traffic, reducing speed limits and creating shared, multi-user roads). All cities were critiqued for poor follow-up on how these temporary measures could be made more permanent past the pandemic.

Another important issue, highlighted by Rothman, was the increase in speeding and stunt driving on emptier roads across the country. Although the number of road collisions and fatalities has decreased in many cities, she noted the rates of collisions and fatalities has actually increased in some cities. With more pedestrians using the roads to maintain social distancing, pedestrians are being put at higher risk for injury, making it more important than ever for cities to balance the opening of roads with continued injury prevention measures.

When asked about "next steps" for cities to plan and implement changes beyond the pandemic, the panelists were firm on the need for permanent infrastructure changes that outlast the current crisis. Komorowski advocated for spaces that are attractive and useful for pedestrians and cyclists in order for people to actually want to use them and want to keep them beyond the pandemic. Rothman explained that to make changes permanent, data will need to be collected to prove to policymakers that people are actually using these spaces. Toderian added that the public voice can be just as influential in convincing politicians of the need for these interventions to become more permanent.



The second panel, held on May 15, focused on "Imagining Car Use and Road Safety Post COVID-19," and featured panelists Rachel MacCleery, Senior Vice President at the Urban Land Institute and Lead of the Building Healthy Places Initiative in Washington, D.C.; Robin Mazumder, Vanier Scholar and Urban Neuroscientist from Waterloo; and Craig Milligan, Road Safety Engineer and CEO at MicroTraffic from Winnipeg. This panel looked at the international response to COVID-19 and road space re-allocation by leaders around the globe, and the lessons and strategies Canadian cities can draw on to implement past the pandemic.

When reflecting on the international response, all panelists commended those who responded with permanent changes to active transportation infrastructure as well as those who responded quickly to shut down expanses of streets for cyclists and pedestrians. They praised cities such as Seattle, which is implementing 64 km of closed streets; Paris, which has committed to a network of cycling lanes along existing metro lines; and Oakland, which is expanding its Slow Streets program to a total of 119 km.



When reflecting on the sustainability of these measures, Milligan noted that temporary structures need to be replaced with more permanent infrastructure that is engineered with safety and injury prevention in mind, especially when higher levels of traffic return to roads. He added that such temporary changes that are used more will be more likely to stay and more likely to be safe.

MacCleery reminded us that changes should be made with a focus on equity and warned that we need to be careful not to shut down city life entirely but shift to more activities outdoors as we continue to navigate social distancing. By encouraging active transportation and getting more people out of their cars, Mazumder pointed out, reduced air pollution can also play a vital role in environmental sustainability. Looking forward, past the pandemic, there were several calls to action made by panelists to make the current changes permanent. Milligan suggested that, for professionals, it will be important to test current temporary measures using case studies and data to prove that temporary changes are safe and effective enough to be made permanent. Once this is done in one city, the results can easily be shared with neighbouring cities. MacCleery encouraged members of the public to engage with local coalitions such as biking and transit coalitions which represent and advocate for local, community interests. She also urged people to support politicians who share in these same values, as well as engage the private sector, which also has an impact on the public landscape (i.e. malls, storefront retailers, and real estate developers).

Finally, Mazumder said that underlying much of the ongoing changes to public landscape should be the need to engage equitably with different members of the public. As evidenced by the pandemic, people of lower socioeconomic status with less access to private outdoor spaces rely more on public spaces, such as parks for recreation and transit for mobility, and will be most vulnerable to changes made to the public landscape. Intersections such as class, income and race must be accounted for when creating permanent spaces for all members of the public to enjoy and access as we look forward.

Recordings of these panels are available to view at https://parachute.ca/en/professional-resource/vision-zero-collection/videos/. These panels were made possible

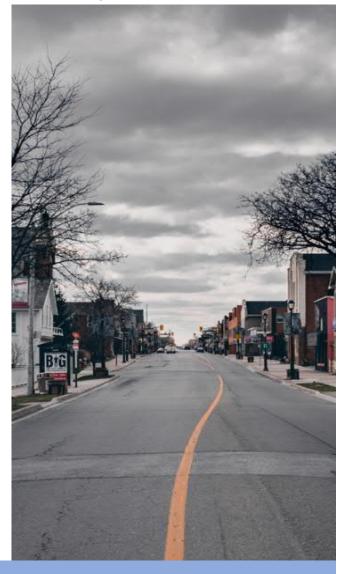
through the support of Desjardins Insurance.

By Anuisa Ranjan, Co-ordinator, Knowledge Translation and Programs, Parachute

Anuisa joined Parachute in 2019 and assists with co-ordination of the Elementary Road Safety project to help make school zones a safer place and assists with Parachute Vision Zero – a multi-national traffic safety initiative.

Anuisa holds a Master of Public Health degree and has more than six years' work experience in community and national level health projects. Her previous work has focused on public health research and policy, health promotion, community engagement, and program planning and delivery through a social determinants of health lens. She is eager to apply this experience and knowledge to Parachute's national level work in injury prevention.

Photo credit: Sanjin Avdičević





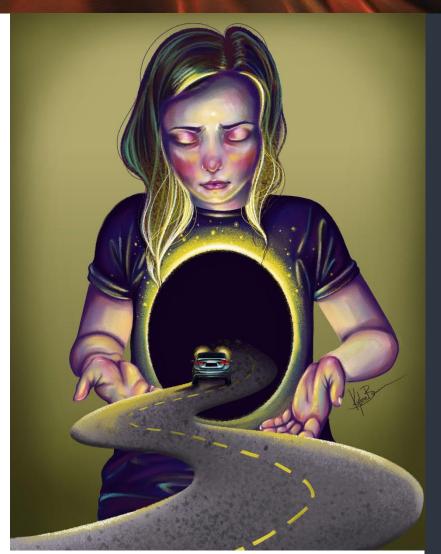
Road Safety Must be Everyone's Choice

Awareness of road safety for most 8-yearolds generally centres around looking both ways before crossing the street and always wearing your seatbelt.

These age-appropriate priorities are usually ingrained thanks to parents' (thanks Mum and Dad) endless reminders to establish fundamental road safety principles. At that age, I believed following these rules would keep me safe. What I didn't realize, was that my safety wasn't just about my choices.

Three months before my 9th birthday, I was injured in a crash caused by a distracted driver. I was travelling home from school, safely secured in the back by my booster seat with the shoulder and lap belt. As the red light we were stopped at turned green giving us right of way, the world behind and beside me exploded with shattering glass, horrific sounds of metal grinding on metal and screeching tires. It was that day I learned road safety was about so much more than my choices as a passenger, pedestrian or cyclist. For me to get home to my family, everyone else also needed to be making the right choice, the safe choice.

The irony is not lost on me that three months previous, my mother (a two-time crash survivor) had started a distracted driving education program called Drop It And Drive® (1) to raise awareness about the risks of distraction and the consequences of preventable collisions. I don't remember much of what I thought about her efforts back in 2010, but I do know that after the crash in early 2011, I understood distracted driving had just become incredibly personal to me and our family.



"The Road" by Kylee Bowman © 2020

The month following my crash was designated distracted driving awareness month in BC. Combining my love of art with an opportunity to have a voice about what I'd experienced, my mother and I partnered to create DIAD's first poster contest for children in BC. This experience allowed me to express myself through art while encouraging other kids, relegated to back seats everywhere, to share their thoughts on this emerging issue of distracted driving. Typically, young kids have not been given a strong voice on road safety, but they see and experience quite a bit as passengers and pedestrians. The 450 posters from kids in kindergarten to grade 7 from across BC demonstrated they had much to say. I think one of the great things about kids is they typically tell it like it is without the constraints of socially acceptable language.

I'm 18 years old now and have spent more than half my life managing the consequences of someone else's choice to pay more attention to distractions than driving. My reality includes chronic neck/back pain, short-term memory loss and a PTSD diagnosis. While the crash somewhat changed the trajectory of the life my parents envisioned for me (ideally



pain-free while pursuing my dreams), as I got older, I refused to let this experience define me. But some changes have been inescapable. While I tried to not let this stop me from doing things other kids my age did, I often had to accept my participation came at a price. It is not something I focus on, but it is always present.

Art has remained a constant passion over the years. I love how I can use various mediums to design pieces from my creative inspirations. I enjoy the freedom of using art to build different realities.

The challenge of that process is my current reality imposes itself on these activities. The physical positions needed to paint, sculpt, and draw are simply not sustainable because of neck pain.

My short-term memory loss has improved, but the PTSD is unpredictable, and the chronic pain is unrelenting. Some days are more of a struggle than others. Without the crash, I doubt road safety would ever have reached this level of awareness for me outside of obtaining my 'N' (new driver) licence and continuing to make choices to help ensure I get home safe.

With my permission, my mother continues to share my story as part of her DIAD youth and corporate seminars to help people understand the consequences of a moment's distraction.

Through my mother's work, I also continue to learn more about road safety, including that motor vehicle collisions are the leading cause of injury for children (2) - I am a case in point.

Opportunities present themselves almost every day for kids and parents alike to speak up about safe choices. I wonder at times if my crash could have been avoided if the passenger in the vehicle that hit us had been that second set of eyes and ears and had spoken up about what their driver didn't notice.

I realize we may not know the difference we make, even just by speaking up, but I am 100% sure that if we don't at least try, we won't make *any* difference.

Road safety must be everyone's choice.

By Kylee Bowman

Kylee Bowman is an independent artist living on Vancouver Island, BC. In 2011, she began practicing some form of visual art on an almost daily basis, perfecting techniques in different mediums and challenging her abilities.

In her graduating year of secondary school, she is preparing to complete her Bachelor of Arts in Visual Arts at Vancouver Island University. Be sure to check out her work (3).

References

- 1. https://diad.tirf.ca/
- Child and youth injury prevention: A public health approach, Oxford Acadenic, Paediatrics & Child Health. Retrieved from: https://academic.oup.com/pch/article/17/9/511/26
 38998#101935957
- 3. http://www.mildlymadgraphics.com/



This issue of The Safety Network Journal was produced through the contributions of the following individuals:

Editorial Board / Comité Éditorial

Geni Bahar, NAVIGATS Inc., North York, ON
Adam Bell, The Municipal Infrastructure Group Ltd., Toronto, ON
Karen Bowman, Traffic Injury Research Foundation, Ottawa, ON & Nanaimo, BC
Jean-François Bruneau, Polytechnique Montréal, Montréal, QC
Mary Chipman, University of Toronto, Toronto, ON
Robert Colonna, Health and Rehabilitation Sciences program at Western University, London, ON
James Fitzpatrick, Graco and Baby Jogger
Pamela Fuselli, Parachute Canada, Toronto, ON (until June 3, 2020)
Alan German, Road Safety Research, Ottawa, ON
Martin Lavallière, Université du Québec à Chicoutimi, Chicoutimi, QC
Rebecca Peterniak, City of Winnipeg, Winnipeg, MB
Julie Taylor, Parachute Canada, Toronto, ON (replacing Pam)

Contributors / trices / teurs

Dr. Evelyn Vingilis, PHD, C. Psych, Director of Population and Community Health Unit, Professor in Departments of Family Medicine, and Epidemiology and Biostatistics, Schulich School of Medicine and Dentistry, Western University, London, ON

Ruheena Sangrar, PhD, O.T. Reg. (Ont.) & Brenda Vrkljan, PhD, O.T. Reg. (Ont.) School of Rehabilitation Science, McMaster University

Anuisa Ranjan, Co-ordinator, Knowledge Translation and Programs, Parachute Canada
Kylee Bowman, Vancouver Island University, Nanaimo, BC

Special Thanks

Special thanks to Pamela Fuselli for serving as previous Editor-in-Chief and SNN Editorial Board member. Pam stepped down from her editorial board responsibilities on June 3. Thanks Pam!



CARSP-ACPSER

17 Meadowbrook Crescent
St Catharines, ON L2M 7G8

Canada

carsp.ca - acpser.ca