



Tuesday, March 28, 2023

The Hon. Minister Omar Alghabra
Transport Canada
Ottawa, Ontario
K1A 0A6

Sent by email to: omar.alghabra@parl.gc.ca

The Hon. Minister Alghabra,

Re: dangers of pickups and SUVs to pedestrians and cyclists

We are writing to you about the greater danger that pickup trucks and SUVs pose to pedestrians and cyclists relative to conventional cars in road crashes. We presume that your ministry is aware of these dangers, as well as the worrisome proliferation of such large vehicles on Canadian roads. We note that in the United States, pedestrian deaths have increased by 50 percent over the past decade, a disturbing trend to which the rise in pickups and SUVs, typically designated as “light trucks,” is believed to contribute.

In January this year, representatives from our Ontario-wide coalition of 16 groups met with Dr. Dirk Huyer, Ontario’s Chief Coroner to discuss this matter in follow up to [our letter of August 2022](#). Although the Coroner did not accede to our call for a full death review on the subject, he did agree to work with us, under our lead, in the development of recommendations to address the problem. The Coroner acknowledged the greater danger to pedestrians and cyclists from pickups and SUVs, which an official of the Ontario Ministry of Transportation (MTO) present at the meeting articulated as a 3.4 times greater risk of death to a pedestrian involved in a crash with a light truck relative to a conventional car.

It is in this context that we respectfully ask you --- or designated staff with relevant expertise --- to meet with our coalition at your earliest opportunity to discuss what measures Transport Canada is taking to address these dangers, and how your ministry might contribute to the development of effective recommendations.

We believe that the proliferation of pickups and large SUVs on public roads requires urgent action to save lives and to spare families of victims a heavy burden of grief.ⁱ As the academic authors of a recent U.S. article, “Effects of large vehicles on pedestrian and pedal-cyclist injury severity,” in the Journal of Safety Research conclude: “Left to fester, the problem of pedestrian and pedal-cyclist injuries and fatalities is certain to worsen.”ⁱⁱ We believe that this is a matter of

significant public interest and concern, as evidenced by the [significant media attention](#) this problem continues to garner.

We set out below our summary of the research respecting the nature of the problem, and some of the solutions to be considered.

Research respecting greater dangers of pickups and SUVs to pedestrians and cyclists

The specific design features that make pickups and large SUVs more dangerous --- and distinguish them from dangers inherent in all motor vehicles --- include driver blind spots, vehicle size and weight, and the high/blunt vehicle front end which changes the point of impact with victims on foot.

The recent and continuing proliferation of pickups and SUVs (largely promoted and used for personal travel) now account for well over half of sales for new automobiles in Canada. The evidence shows that these vehicles are causing more road deaths than if conventional cars --- which generally serve the same purposes --- were used. Pickups have of course been used for commerce and the transport of goods for many decades, but these vehicles, which have been compared in size to WWII tanks, have continued to grow over the past decade, often operated in densely populated urban areas in the midst of children, seniors, and persons with disabilities, by drivers with no additional skills to compensate for the greater risks posed by their vehicles.

In the period 2000 to 2018, “the average pickup grew 11% taller and became 24% heavier.”ⁱⁱⁱ The front ends of many pickups are now so high that drivers are sometimes unable to see pedestrians directly in front of them due to the large front end blind zone. This danger is exacerbated for individuals, including children on foot or persons using mobility devices, whose height above the road is lower. The effect of putting drivers higher up also results in pedestrians being less visible during turning manoeuvres, a problem that is already well-documented for the drivers of heavy trucks.^{iv} Certain design features, such as wider roof support pillars, may also create blind zones that make it more difficult for drivers to see pedestrians that are beside them. (We also note that the height of pickups and large SUVs also obscures sightlines for pedestrians crossing the street or cyclists riding alongside these vehicles, while windows that are often tinted further hampers sightlines even for a pedestrian or cyclist who is at a sufficient height to otherwise see through and across vehicle windows.^v)

The ever-increasing weight of pickups and SUVs is likewise problematic, creating deadlier kinetic force on impact. As well, the high, blunt front ends of large pickups and SUVs concentrate the impact of the vehicle at the torso of a pedestrian victim rather than the knees, increasing the likelihood of serious injuries to vital organs and the head, and diminishing the chances of survival for the pedestrian.

We are also very concerned that the trend toward larger vehicles may accelerate, not only because of aggressive marketing but because of a perception, if not the reality, of greater

safety for occupants of larger motor vehicles in crashes with smaller ones. In reality, one motorist's gain may be another's loss while the entire community loses with larger vehicles since virtually every person will at some point be a pedestrian.

Our review of Toronto Police Service data for 2021 shows that in the 20 pedestrian and cyclist deaths where the motor vehicle was identified, 45% were killed by pickups and SUVs, compared to 20% by conventional cars. Although this is a relatively small sample size for a single Ontario city, the number is nonetheless consistent with the research detailed in Section B.

The climate context is also important. Light-duty vehicles already account for about 11% of Canada's **total** GHG emissions.^{vi} The ongoing climate crisis, and the generally higher emissions from pickups and large SUVs, simply adds another troubling dimension to the existing trend to larger vehicles. Cities and towns across Ontario, and beyond, are today struggling to reduce travel by motorized private vehicles to address pressing issues of affordability, social equity, and climate change, but if our roads become even more dangerous to people who want to walk or cycle (including for trips to the transit stop), the public cannot reap the full benefit of active transportation and public transit nor reduce the heavy GHG emissions from the transportation sector.

A. DANGER FROM PICKUP TRUCKS AND SUVs TO PEDESTRIANS AND OTHER ROAD USERS

There is a growing body of evidence that the design of pickups and large SUVs makes them particularly hazardous in crashes involving pedestrians. Research studies generally identify three issues: the configuration of the front end, the heavy weight (and kinetic force in crashes), and blind spots for the driver.

We note that in the Ontario Chief Coroner's 2012 Pedestrian Death Review, a total of 53% of all deaths for the period of study involved pickups, SUVs, vans, and heavy trucks compared to 34% for cars.^{vii} These numbers have likely changed for the worse given the proliferation of pickups and SUVs.

The following research studies and articles, largely from the U.S. --- but confirmed by the MTO's 2020 study --- suggest that pedestrians and cyclists are at a greater risk of death in crashes involving pickups and SUVs than in crashes with cars.

Uytae Lee, "The Problem with SUVs," CBC (visual demonstration), April 2, 2022:

- the high, blunt, front-end design of pickups and SUVs changes the point of impact of the vehicle with a pedestrian's body, with the result that the victim is more likely to be struck in their torso suffering injuries to their head and vital organs than to their legs, as with conventional cars -- and then to suffer the risk of being run over by the motorist; and

- based on collision safety data, drivers may have a “compelling reason” to have a bigger, heavier vehicle leading to an “arms race” in car size.

Insurance Institute for Highway Safety (U.S.A.):

May 2018 study^{viii}

- in the period 2009 to 2016, pedestrian fatalities involving SUVs increased by 81% -- more than for any other vehicle type;^{ix}
- the higher, and often more vertical, front ends of SUVs, compared to cars, are more likely to strike a pedestrian in the head or chest;
- changes to the front-end design of these vehicles could help lessen the severity of injuries in crashes involving pedestrians; and
- front crash prevention sensors and systems to detect pedestrians have been shown to be effective, especially if designed to work in conditions of low light.

May 2020 study^x

- this review of SUVs in 79 serious injury or fatal crashes with pedestrians in the State of Michigan found that the “leading edge” (namely, the front end) produces an elevated pedestrian injury risk, a finding that was consistent with previous research;^{xi}
- at speeds of 20-39 mph (31 to 63 km/h), 30% of crashes involving late model SUVs (the median model year for the vehicles was 2009) resulted in a pedestrian fatality, compared to 23% for cars;
- during the past two decades SUVs have remained disproportionately more likely than cars to injure pedestrians;
- “In a crash with a traditional, block-front SUV, the grille strikes the pedestrian’s pelvis or chest split seconds after the bumper hits the lower extremities, transferring more energy to the pedestrian’s body. It’s possible that a more sloping profile could do less damage;” and
- earlier research from the 1970s, 80s, and 90s showed that a pedestrian involved in a crash with an SUV, pickup or van was two to three times more likely to die than if the pedestrian was struck by a sedan.^{xii} Subsequent design changes to SUVs reduced the risks **to occupants of other vehicles** in crashes (though pickups lagged in such design changes), but it is unclear if the changes had any beneficial outcome for pedestrians in

crashes with SUVs.^{xiii} Indeed, single-vehicle pedestrian fatalities involving SUVs increased more than those involving other vehicle types over the past decade.

March 2022 study^{xiv}

- “certain types of pedestrian crashes — including those that occur while the vehicle is turning — are more likely to occur with SUVs, pickups, vans and minivans;”
- “At intersections, the odds that a crash that killed a crossing pedestrian involved a left turn by the vehicle versus no turn were about twice as high for SUVs, nearly 3 times as high for vans and minivans and nearly 4 times as high for pickups as they were for cars;”
- “The odds that a crash that killed a crossing pedestrian involved a right turn by the vehicle were also 89 percent higher for pickups and 63 percent higher for SUVs than for cars;”
- “At or near intersections, pickups were 42 percent more likely and SUVs were 23 percent more likely than cars to hit pedestrians when turning left;”
- “Away from intersections, pickups were 80 percent and SUVs were 61 percent more likely than cars to hit a pedestrian walking or running along the road;”
- “the size, shape or location of the A-pillars that support the roof on either side of the windshield could make it harder for drivers of these larger vehicles to see crossing pedestrians when they are turning;” and
- “Some general vehicle-design solutions that have already shown promise include AEB systems that can detect and avoid pedestrians or reduce impact speed; hood airbags; hoods that automatically pop up on impact; and more sloped front ends.”

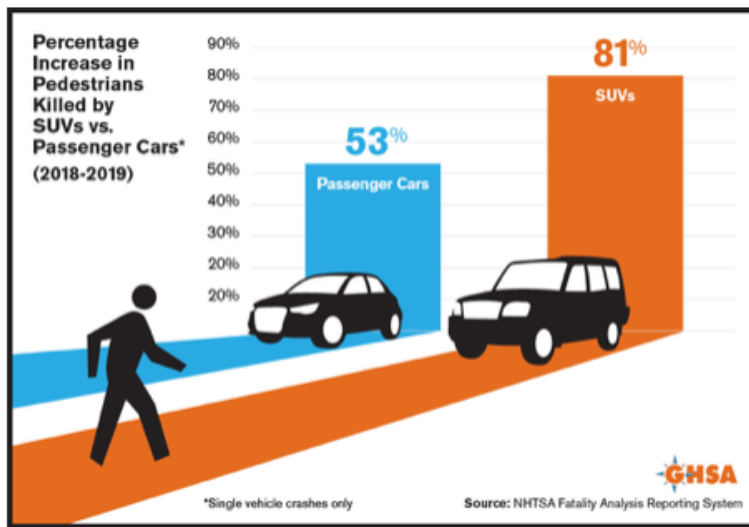
OECD, International Transport Forum report on Canada:

- “since 2010, the number of fatal casualties decreased for all user groups with the exception of pedestrians. Between 2010 and 2018, against an overall decrease of 14%, the number of road deaths ... increased by 5.6% for pedestrians (p 3).”

U.S. Governors Highway Safety Association, 2019 preliminary data^{xv}:

- between 2008 and 2019, pedestrian fatalities in the U.S. increased by 53%; and

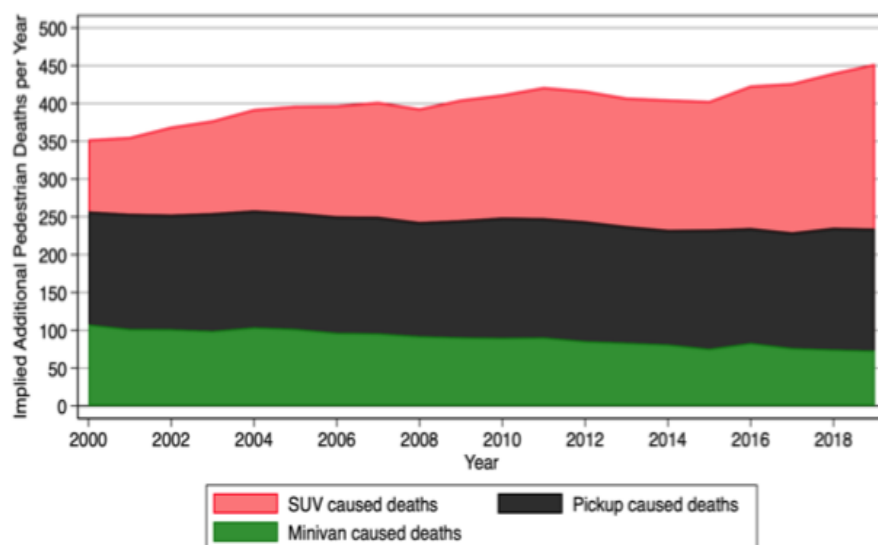
- in the period 2018-2019, pedestrian fatalities in crashes involving SUVs increased by 81% compared to 53% for cars.



Professor Justin Tyndall, “Pedestrian deaths and large vehicles,” *Economics of Transportation, Volumes 26–27*, June–September 2021 (U.S.):

- for the period 2000-2019, an estimated “8,131 pedestrian lives would have been saved if all light trucks had been cars. The reduction would be equal to avoiding 9.5% of all pedestrian deaths (p 24);”

Figure 6: Annual Pedestrian Deaths Averted if all Light Trucks had been Cars

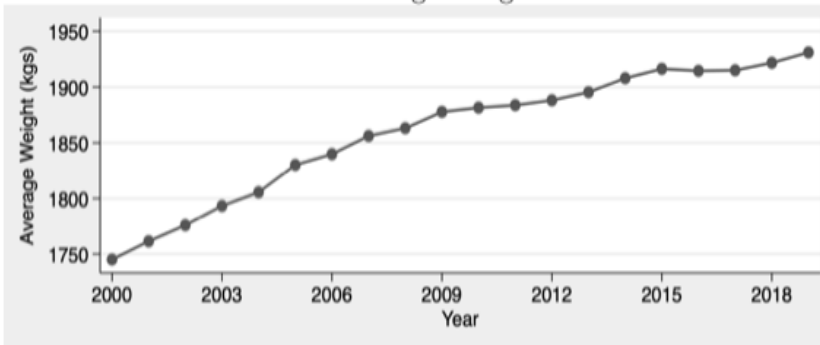


Relying on estimated partial effects, the figure plots the number of pedestrian fatalities that would have been averted if all light trucks were replaced by cars. Over the entire study period, converting all light trucks to cars would have prevented 8,131 pedestrian deaths.

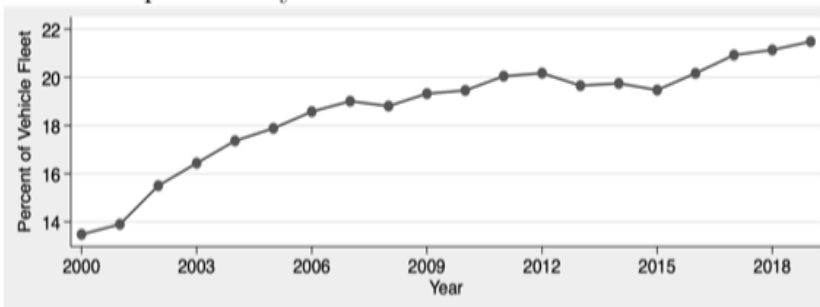
- “In 2000, converting all light trucks to cars would have spared 353 pedestrians, while by 2019 the figure had grown by 30% to 459 pedestrians. Accounting for the overall population increase of the metros, the number of pedestrian deaths attributable to light trucks increased by 7.6% on a per capita basis (p 24).”
- “Vehicle body types appear to be an important determinant of pedestrian deaths in the aggregate, strengthening arguments made in the transportation safety literature regarding the link between larger light trucks and more severe pedestrian injuries;
- “average vehicle size has undergone a sustained increase over the past 20 years, with no signs of abating. If the popularity of large vehicles continues to rise, there is likely to be a corresponding increase in pedestrian fatalities. Given strict federal regulation of vehicle safety standards, it is perhaps surprising that there is limited legislation that restricts the overall size and body type of vehicles with the intent of improving pedestrian safety (p 27);”
- “While larger vehicles are designed to protect their drivers and passengers in the event of a crash, less concern is given to the effect on pedestrians;”

- “Jointly considering that light trucks do not appear to improve aggregate road safety, but do improve driver and occupant safety suggests that driving a larger vehicle offloads fatality risk from the occupants to other road users (p 22).” [This phenomenon was lampooned in *The Onion* in a macabre article, “Conscientious SUV shopper just wants something that will kill family in other car in case of accident,” September 2020];
- two potential reasons why light trucks (including pickups and SUVs) are more deadly than conventional cars:
 - a. the additional weight of pickups and SUVs means it takes more time for the motorist to stop the vehicle and the vehicle will strike with more force in a collision; and
 - b. the higher front end of a pickup or SUV affects the point of impact with a pedestrian. In crashes with conventional cars the pedestrian may be hit in the legs and propelled over the hood, while crashes with SUVs are more likely to involve the victim’s head and torso, harming vital organs and sending the victim under the wheels.^{xvi}
- “Between 2000 and 2019 the average weight of consumer vehicles involved in a fatal crash increased by 11%, the prevalence of SUVs increased by 59% and the share of vehicles that are more than 2,500 kg increased by 374% (p 2);”
- every 100 kg increase in average vehicle weight is associated with an additional .03 fatalities per 100,000 residents;
- there is a statistically significant difference between large and small SUVs in the danger to pedestrians;
- pickups, minivans and SUVs all significantly increase pedestrian fatalities relative to cars. Converting 10% of the vehicle fleet from cars to pickups is estimated to increase the pedestrian fatality rate by .04 deaths per 100,000 residents (3.4% in the median metro area);
- since 2000, in metropolitan areas of the U.S., containing 77% of population, there has been a significant increase in size and weight of vehicles involved in fatal collisions:

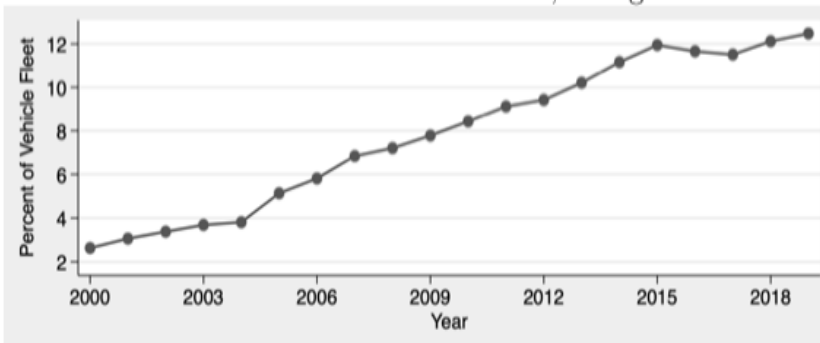
A. Average Weight



B. Sport Utility Vehicles as a Share of all Vehicles



C. Share of Vehicles Over 2,500 kg

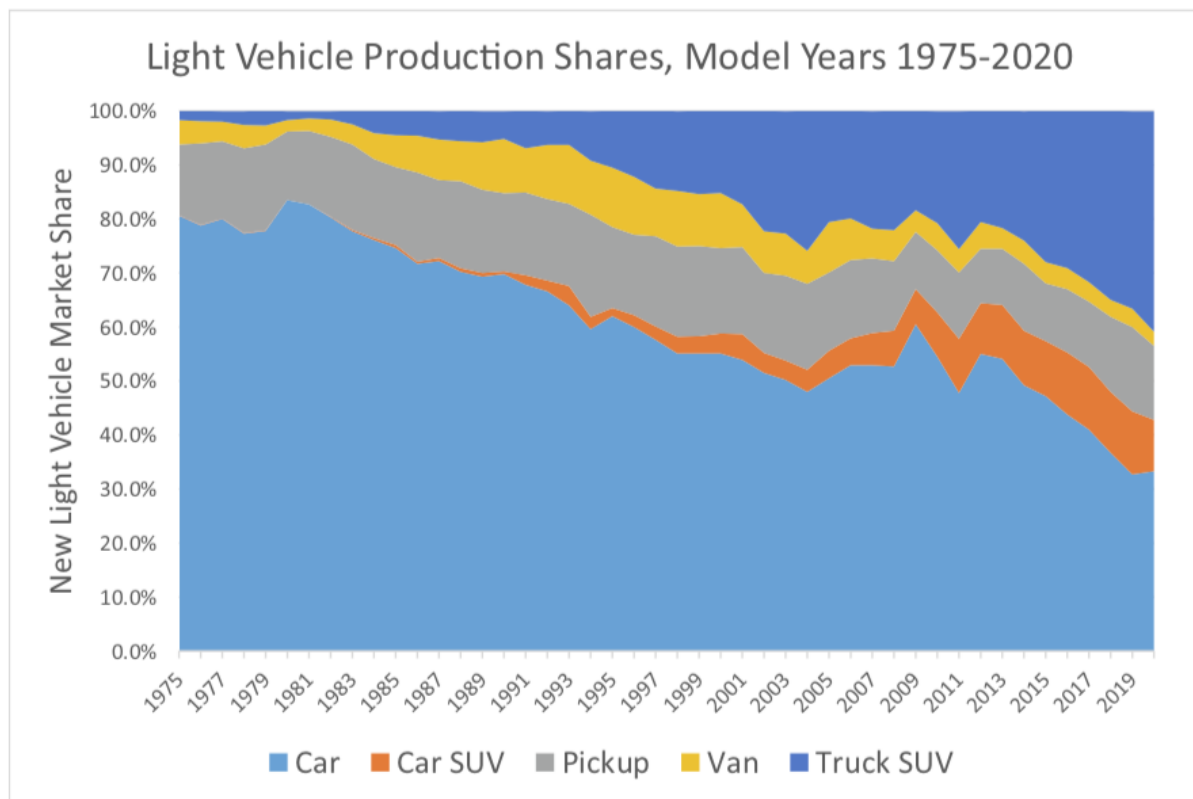


- several additional papers are cited about the increased danger of pickups and SUVs, and although these papers are now somewhat dated, there is little evidence that changes to vehicle design have made these vehicles less dangerous to pedestrians:
 - a. Simms and Wood, 2006 and Tamura *et al.*, 2008 for evidence that crashes with light trucks (SUVs, pickups, and vans) are more likely to result in a fatality;
 - b. Lefler and Gabler, 2004, based on U.S. data from the 1990s, estimating that a pedestrian struck by a light truck is two to three times more likely to die than a pedestrian struck by a car; and

- c. Desapriya *et al.*, 2010, based on meta-analysis of papers concerned with pedestrian fatalities, found that the chance of fatal injury among pedestrians was 50% higher when struck by a light truck compared to a car.

Mickey Edwards and Daniel Leonard, “Effects of large vehicles on pedestrian and pedal-cyclist injury severity,” *Journal of Safety Research*, June 2022 (in press):

- “from 2010 to 2019 pedestrian fatalities [in the U.S.] increased by 46% to 6,301 deaths^{xvii},”
- While the purchase of conventional cars is diminishing in the U.S., sales of “truck SUVs” has increased significantly [a similar trend is evident in Canada]:



- “Taller and heavier vehicle types (like pickup trucks, SUVs, and vans/minivans) combined to make up just 26.1% of pedestrian and pedalcyclist crashes, but were the striking vehicle in 44.1% of fatalities;”
- “SUVs were especially overrepresented in fatalities. Though SUVs were the striking vehicle in 14.7% of cases, they were involved in greater than one-in-four (25.4%) fatalities;”

- “Pickup trucks were also overrepresented in fatal pedestrian and pedalcyclist crashes relative to the proportion of all cases. Of all pedestrian and pedalcycle fatalities, 12.6% involved a pickup truck – some two and a quarter times the proportion of all cases involving a pickup. Conversely, though passenger cars were the striking vehicle in 62% of cases, they were involved in just 38.4% of fatalities;”
- “A child (under age 18) struck by a SUV was eight times more likely to be killed than a child struck by a passenger car;”
- “An adult (aged 18–64) struck by a pickup truck was four times more likely to be killed than an adult struck by a passenger car. And a senior (aged 65 and over) struck by a pickup truck was nearly three times more likely to be killed compared to a senior struck by a passenger car;”
- “In every age group, passenger cars represented the greatest proportion of fatalities, though they were underrepresented relative to the proportion of cases in which they were involved. For example, passenger cars were the striking vehicle in almost 62% of pedestrian and pedalcyclist crashes involving children, but just about 19% of childhood fatalities;”
- “the proportion of fatalities involving pickup trucks was more than double the overall proportion of pickup trucks involved in pedestrian and pedalcyclist crashes for all age groups. For example, pickup trucks were the striking vehicle in 6.1% of all cases involving seniors, but represent 13.5% of all senior pedestrian and pedalcyclist fatalities;”
- “SUVs were particularly deadly for children. SUVs were the striking vehicle in greater than 40% of childhood fatalities, even though SUVs were involved in just 16.9% of childhood cases;”
- “children represented 21% of all pedestrian and pedalcyclist crash victims but 26.1% of cases involving SUVs – implying SUVs were not only more deadly, but also disproportionately struck children;”
- “Together, SUVs, pickup trucks, and vans/ minivans combined to cause two-thirds of fatalities involving child pedestrians and pedalcyclists;”
- “the model estimates that a pedestrian or pedalcyclist struck by a pickup truck was 4.7 times more likely die as a result. Those struck by a SUV or van were 3.37 times and 4.58 times more likely to be killed, respectively;”
- “Pedestrians and pedalcyclists struck by a large motor vehicle were more likely to suffer moderate or worse injuries to their thorax compared to those struck by a passenger

car. Though the proportion of pickup trucks involved in all cases examined here was 5.6%, that proportion nearly doubles to 11.1% of all non-minor thorax injuries.”

Professors Michael Anderson and Maximilian Auffhammer, “Pounds that kill: The external costs of vehicle weight,” National Bureau of Economic Research, 2013:

- “Heavier vehicles are safer for their own occupants but more hazardous for other vehicles;” and
- controlling for own-vehicle weight, being hit by a vehicle that is 1,000 pounds heavier generates a 40-50% increase in fatality risk.^{xviii}
- [Thus, in the context of road crashes, the transition to electric vehicles will not alleviate the danger since electric vehicles are heavier because batteries add about 1,000 lbs. to a vehicle. The GMC Hummer EV’s battery, for instance, weighs about 3,000 lbs., adding to a vehicle that already exceeds 9,000 lbs.]

American Automobile Association, “AAA Warns Pedestrian Detection Systems Don’t Work When Needed Most,” AAA Newsroom, October 2019:

- pedestrian detection features on vehicles are not proving effective to compensate for larger vehicle sizes. These detection systems don’t work at night or at high speeds, don’t detect 90 percent of children, and can’t detect pedestrians in crosswalks when the vehicle is turning.

Ontario Ministry of Transportation - [“Ontario’s Pedestrian Crash Causation Study”](#), June 2020

This research paper reported that 61% of pedestrian road fatalities in the province involve pickups and SUVs, which represent only 41% of road vehicles. The same paper noted that a pedestrian involved in a crash with a light truck is 3.4 times more likely to die than in a crash with a conventional car.

This paper makes clear that the U.S. research applies to the Canadian context, and supports our view that the increasing prevalence of pickups and SUVs in Ontario is a cause of great concern, but also an opportune moment for strategic interventions at all levels of government if we are to avoid the U.S. experience where pedestrian deaths have increased at a disturbing rate, with larger vehicles among the likely causes.

The Ontario Road Safety Annual Report (ORSAR) 2018 --- the last year for which final figures are available --- also offers valuable findings, particularly the significant reduction in overall road fatalities, *with the notable exception of pedestrian fatalities that are on the rise:*

- a. road deaths have *decreased* from 1,102 to 602 in the period 1999 to 2018, however, in the period 2009 to 2018, pedestrian deaths have increased by 2% from 20% to 22% of all road deaths – p. 11; and
- b. since 1990 there has been a dramatic *decrease* in road deaths in Ontario for both drivers (from 540 to 271) and for passengers (from 321 to 104), while deaths for pedestrians have fluctuated minimally during the same period (from 154 to 134) – p. 28;

The report does not helpfully distinguish between types of vehicles other than as between, for example, passenger vehicles, passenger vans, pickup trucks and various other types such as mopeds, buses, etc. Of the 948 vehicles involved in the 602 fatalities in the province in 2018, 114 vehicles (or 12%) were pickups. (One or more vehicles may be involved in a single fatal crash.) – p. 62.

In addition to this research, we note that automobiles are not equipped with interlock (breathalyzer) or identification devices, so drivers do not have to show sobriety, a valid license or insurance policy in order to start a car. There is no systemic measure to prevent drunk, unlicensed or uninsured drivers from driving and killing. Vehicles do not have GPS location-based speed-limiting technology, so there is no measure to prevent speeding, that increases the road danger. In addition, all vehicles are increasingly manufactured with distracting in-car screens, flouting the illegality of not allowing drivers to look at cell phone screens while driving. These problems are simply exacerbated given the perils associated with larger vehicles.

B. ANALYSIS OF DEATHS IN TORONTO IN 2021 INVOLVING PICKUPS and SUVs

Toronto police records of pedestrian and cyclist deaths for the year 2021, admittedly a small sample size, are generally consistent with the academic research. We reviewed all pedestrian and cyclist deaths in 2021 on Toronto roads involving pickups and SUVs. We do not distinguish between large and small SUVs since most police reports do not provide a vehicle model, but the research suggests it is the larger SUVs that pose the greater danger.

We identified a total of 26 road crashes in which pedestrians or cyclists suffered fatal injuries. We excluded from the 26 pedestrian and cyclist deaths, six cases in which the type of motor vehicle involved was not reported by police, leaving 20 for our assessment.

The results of our review for 2021 shows the following types of vehicles involved in fatal crashes that resulted in pedestrian and cyclist deaths (including individuals in mobility devices such as scooters or wheelchairs):

Type of vehicle	# of fatalities (pedestrian/cyclist)	% of fatalities (pedestrian/cyclist)
Conventional cars (e.g., sedans, coupes)	4	20%
Pickups	2	10%
SUVs (crossovers and large SUVs + Jeeps)	7	35%
Heavy trucks (dump or cement trucks)	4	20%
TTC	0	0%
Minivans and commercial vans	3	15%
Total	20	100%

We could not find a statistical breakdown for vehicle types on Toronto roads. We conducted our own rudimentary analysis based on two counts of almost 2,000 vehicles, the first on a downtown arterial road and the second on a suburban arterial. (The downtown count was conducted near the location (and at a proximate time) where a young man was killed by a heavy truck in 2021.)

In the downtown count, 51% of vehicles were conventional cars, while in the suburban count the figure was 36%. Pickups were more common in the suburban count, but still only amounted to 7% of all vehicles compared to 2.5% in the downtown count. SUVs accounted for 41% of vehicles in the downtown count, a figure which we attempted to divide as between larger and smaller (“cross-over”) models. The larger SUVs accounted for 18% of all vehicles in the downtown count with a comparable figure of 25% in the suburban count (although this was based on a cursory visual assessment). Heavy trucks (and buses) accounted for no more than 2.5% in each count.^{xix} Based on our personal observations, we believe that pickups are far more common in areas beyond the city.

Perhaps the most noteworthy number in the Toronto Police figures is the underrepresentation of conventional cars in fatalities, consistent with the findings of Professor Tyndall who concludes that the number of road deaths would be significantly lower if conventional cars took the place of pickups and large SUVs on our roads.

Statistics Canada does provide a statistical breakdown of vehicles for Ontario, but the data is generally unhelpful to our purposes since SUVs and pickups are combined in the “passenger vehicle” category. The agency reports an increase in the number of registered “light vehicles” -- a category for vehicles weighing 4,500 kg or less, comprised of passenger cars, light trucks, and

vans, from 7.9 million to 8.5 million between 2015 and 2019.^{xx} The composition of this category has changed with a far larger proportion of “light trucks” (pickups, SUVs and minivans) relative to passenger cars. This is no surprise given that for new vehicle sales in Ontario between 2010 and 2019, “trucks” --- prominently including pickups, SUVs, and minivans (and a far smaller number of buses, vans, and heavy trucks) --- increased dramatically from 324,318 to 632,202. During the same period, sales of passenger cars, which stood at 262,315 in 2010, increased until 2014 before beginning a steady decline, reaching 216,504 in 2019. (In 2020 and 2021, during the height of the pandemic, sales of both types fell.)

C. OPPORTUNITIES AND POTENTIAL REMEDIAL ACTION

The proliferation of pickups and large SUVs on our roads constitute a real and preventable threat to the lives of pedestrians, cyclists, and persons with disabilities on our roads. The interests of the general public appear to be at odds with those of automakers who are aggressively marketing pickups and large SUVs not because they are more useful to consumers, but because they reap higher profit margins. The corporate profit motive cannot justify a trend to deadlier vehicles.

We are confident that there are many available options to address the dangers of pickups and large SUVs. We offer a list of some of these opportunities in this section.

In the case of pickups, we note that there are safer transportation products that require neither the size nor weight of current offerings. In short, the current over-sized pickups do not entail any substantial increase in utility for most users; indeed, there are conventional options, namely sedans, that are equally useful.

Educating the public, either as road users or as consumers of pickups and SUVs, is perhaps the easiest first step in lessening the danger of these vehicles to pedestrians and cyclists. Changes to advertising regulations could be implemented to include warnings in print or digital ads and other marketing materials of the dangers posed by pickups and large SUVs. Consumers in the market for a new vehicle may decide that the added danger constituted by a pickup or large SUV is unacceptable and imprudent.

A proposal before the New York State Assembly would require the state’s Department of Transportation to maintain a database ranking each vehicle model based on the rate of crashes and the severity of injuries to pedestrians or cyclists, thus allowing for the labelling of new cars and the education of consumers about safety risks associated with a vehicle.^{xxi} Such a rating system could be adopted in Canada to rate and highlight safety risks associated with particular vehicles and thereby to discourage consumers from purchasing vehicles that are a danger not only to other road users but to their own family members during manoeuvres such as, for example, backing out of a home driveway. The European New Car Assessment Program (NCAP) already contains a rating system for the safety of people outside of the car. The U.S. National Highway Traffic Safety Administration’s ([NHTSA](#)) does have a “New Car Assessment Program”

that rates the safety features of cars, including blind spots detection devices, but does not yet require information about vehicle tests relating to pedestrian injuries.^{xxii}

New technologies may help curtail risks inherent in the design of pickups and SUVs. Safety systems such as automatic emergency braking and pedestrian detection systems are now commercially available and could be required on all such vehicles sold in Canada.

The particular peril posed by pickups and SUVs may justify a recommendation for special licensing and testing requirements, perhaps by requiring SUV and pickup drivers to obtain a Class D license, recognizing that standard driver training does not prepare drivers to operate these vehicles safely.

The most dangerous of the pickups and SUVs might be restricted or even banned in cases where other measures are inadequate. This may be necessary in the case of the largest pickups or SUVs where enormous front ends simply pose too great a risk to other road users. The risks of these vehicles, in the absence of real-world needs, especially in urban areas, may not provide a sufficient rationale for their use. (We note that the vast majority of consumers never use large pickups and SUVs for their advertised capacities, such as off-roading or heavy towing.)

The drivers of pickups and large SUVs might be restricted from making specific manoeuvres, including right turns on a red signal. Municipalities might also increase parking rates for large pickups and SUVs to reflect actual space consumed and to dampen demand for such purchases.

David Zipper has outlined actions that governments can take to address road danger by reducing the use of large pickups and SUVs, including the scaling of local fees (including parking fees) to vehicle size, making more parking spaces for small cars, banning certain large vehicle features such as “bull bars” that increase harm to pedestrians in crashes, and reducing the size of vehicles in city fleets.^{xxiii}

Professor Justin Tyndall proposes “Pigouvian taxes” to internalize the external costs of pedestrian fatalities attributable to driving a light truck instead of a car. These taxes, suggests Tyndall, could be implemented with annual taxes based on vehicle type that are equal to the marginal external costs, so that the greater pedestrian fatality risk is internalized in the cost of a vehicle.^{xxiv} In Ontario, vehicle licence plate renewal fees could be renewed based on a sliding scale so that the amount of the fee is commensurate with the weight and design of the vehicle, in recognition of the added peril to other road users.

Since the height of the driver above the road likely impairs the driver’s view of the road, it may be that specifications must be mandated in the manufacturing process. One easily addressed problem is the prevention of vehicle modifications that further raise the cab (and the driver) above the road, increasing the problem of the driver’s view of the road.

We believe that road deaths involving heavy trucks, which remain a constant, predictable, tragic reality of our roads can be prevented with the right combination of measures, including

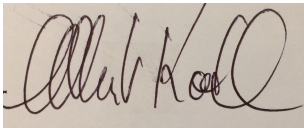
cab re-design along with cutting edge safety devices and technologies, driver education, and restrictions on when and where such vehicles can be used. Other provincial measures might include the enhancement of existing driver training programs to better protect pedestrians and cyclists.^{xxv} In its 2018 review, albeit to relating to heavy trucks, Transport Canada noted that driver blind spots, largely caused by poor cab design, can be improved by reducing the size of support columns and repositioning them so that the truck driver's field of vision is almost entirely unobstructed.

D. Conclusion

The proliferation of large pickups and SUVs makes action to address the associated dangers particularly urgent

We look forward to hearing from you.

Sincerely,

A handwritten signature in black ink on a light-colored background. The signature is cursive and appears to read "Albert Koehl".

Albert Koehl
on behalf of a coalition of 16 Ontario community groups

cc The Hon Steven Guilbeault, Minister of Environment
Dr. Dirk Huyer, Ontario Chief Coroner
Ibrahima Sow, Executive Director, Road Safety and Vehicle Regulations, Multi-modal and Road Safety Programs, Transport Canada
Michael McGrath, Ontario Ministry of Transportation

ⁱ Even as of the 2016 model year, [the light-truck segment accounted for 53% of new vehicle sales in Canada](#).
“Automobile truck emission regulations.”

ⁱⁱ Mickey Edwards and Daniel Leonard, “Effects of large vehicles on pedestrian and pedal-cyclist injury severity,”
Journal of Safety Research, June 2022 (in press).

ⁱⁱⁱ America Walks, Webinar: “Vehicle Safety for Pedestrians 101,” online at: <https://americawalks.org/webinar-vehicle-safety-for-pedestrians-101/>

^{iv} Transport Canada, “Safety Measures for Cyclists and Pedestrians around Heavy Vehicles: Summary Report,” June 2018, 38. (Subsequently referenced as: Transport Canada, “Safety Measures.”)

^v If a third party vehicle (specifically, a pickup or large SUV) was obscuring the sight lines of a nearby cyclist/ or a pedestrian killed in a collision while crossing the street, then one could attribute the true cause of the collision to **reduced visibility** due to the height of the pickup or the SUV, rather than to the driver of the vehicle that made **kinetic contact in the collision**. However, the police report will probably name the latter as being responsible for the fatality — and if the former is mentioned at all, it will likely only be as an incidental factor. It’s unlikely that official statistics will properly account for these nuances in agency.

^{vi} “Canada’s third biennial report on climate change” was submitted to the United Nations Framework Convention on Climate Change in 2017 and projects that greenhouse gas emissions from the transportation sector in Canada will fall from 173 Mt CO₂eq in 2015 to 155 Mt CO₂eq by 2030. Light-duty vehicle emissions in particular are projected to fall from 83 Mt in 2015 to 61 Mt in 2030 as seen in [table 1](#) below. These projections assume that the stringency of the existing standards stay as they are until 2025 and then remain at the 2025 level until 2030.”

^{vii} Vans were involved in an additional 19% of road deaths. *Cf.*, Ontario Chief Coroner, “Cycling Death Review,” 2012.

^{viii} “Study highlights rising pedestrian deaths, points toward solutions”

^{ix} Vehicles with high horse-power were also more likely to be involved in deadly crashes with pedestrians.

^x Samuel S. Monfort and Becky C. Mueller, “Pedestrian injuries from cars and SUVs: updated crash outcomes from the Vulnerable Road User Injury Prevention Alliance (VIPA),” May 2020. Analysis of 79 deadly crashes in three Michigan cities. *Cf.*, “New study suggests today’s SUVs are more lethal to pedestrians than cars,” June 16, 2020.

^{xi} The report authors conceded that the small sample size meant that a larger study would be needed to confirm the findings.

^{xii} Citing Lefler D, Gabler HC. The fatality and injury risk of light truck impacts with pedestrians in the United States. *Accid Anal Prev.* 2004; 36:295-304. doi:10.1016/s0001-4575(03)00007-1; and Roudsari BS *et al.*, “Pedestrian crashes: Higher injury severity and mortality rate for light truck vehicles compared with passenger vehicles,” *Inj Prev.* 2004; 10(3):154- 158. doi:10.1136/ip.2003.003814 “the injury patterns were consistent with earlier, national studies in showing that SUVs were more likely than cars to throw pedestrians forward and nearly twice as likely to cause severe hip and thigh injuries. These injuries were mainly caused by impacts with the bumper, grille or headlights. That’s likely because the high point of the front profile, or “leading edge,” of most new SUVs is still considerably higher than that of the average car.

^{xiii} “SUVs no longer pose outsize risk to car occupants, but pickup compatibility lags,” IIHS, October 10, 2019.

^{xiv} “SUVs, other large vehicles often hit pedestrians while turning,” IIHS, March 17, 2022

^{xv} <https://www.ghsa.org/resources/Pedestrians20>

^{xvi} *Cf.*, Frontover fact sheets, Kids and Cars.org, noting that “frontover” collisions involving SUVs and pickups have increased rapidly given their very large front blind spots.

^{xvii} Citing [GHSA, 2021](#)

^{xviii} We also note evidence that women (as motorists) suffer a greater number of serious injuries in vehicle crashes, which may be attributable to their lesser propensity than men to buy large vehicles such as pickups. Matthew L. Brumbelow & Jessica S. Jermakian (2021): “Injury risks and crashworthiness benefits for females and males: Which differences are physiological?” *Traffic Injury Prevention*, DOI: 10.1080/15389588.2021.2004312

^{xix} We include jeeps in the large SUV category. Albert Koehl conducted the counts on August 3 and 4, 2022. The first between 4:40pm and 5:30pm at the southeast corner of University Ave at Bloor St. (Miguel Escanan was killed just north of Bloor St on Avenue Rd, which is contiguous to University Ave. He counted 835 motor vehicles, including 430 cars, 191 “crossover” SUVs, 152 larger SUVs, 16 minivans, 21 pickups, 2 buses, 0 heavy trucks, 18 commercial vans, and 8 motorcycles. The second count between 7:55am and 8:47am on arterial Bloor St W, near The Queensway. He counted 993 vehicles including cars (362), SUVs: crossover (193), large (251); minivans (47); pickups (71); heavy trucks and buses (24); commercial vans (42).

^{xx} A total of 9.03m road vehicles were registered in 2019 (an increase from 8.4m in 2015).

^{xxi} The initiative is cited in Edwards and Leonard as: “New York Assembly. New York State Senate. Transportation Committee. 2020. An act to amend the vehicle and traffic law, in relation to creating a pedestrian safety rating system for motor vehicles. 2019-2020 Legislative Session. S7876.” For an article summarizing the New York

initiative, see: Laura Bliss, “Should SUVs Get a Pedestrian Warning Label?” Bloomberg, City Lab – Transportation, May 24, 2021.

^{xxii} The NCAP is currently being updated. The NHTSA issued a request for comments on the New Car Assessment Program on Mar 3, 2022. The NHTSA’s 5-Star Safety Rating Program was introduced in 1993 and updated in 2015.

^{xxiii} David Zipper, “How Cities Could Push Back on Pickups and SUVs,” Bloomberg News, September 17, 2020. *Zipper is a Visiting Fellow at the Harvard Kennedy School’s Taubman Center for State and Local Government, where he examines the interplay between urban policy and new mobility technologies.*

^{xxiv} At p 26, he concludes that, based on “the value of a statistical life, the implied economic cost of the 8,131 pedestrian deaths attributable to the presence of light trucks between 2000 and 2019 is \$85 billion. The possibility of reducing the pedestrian safety externalities imposed by large vehicles through regulation could provide significant societal welfare improvements.”

^{xxv} Transport Canada, “Safety Measures for Cyclists and Pedestrians,” 29.”