Title: Canadian Association of Emergency Physicians (CAEP) Position Statement on the Safety Considerations of Electric Scooter Use

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Short title: CAEP Position Paper on E-scooters

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Executive summary:

Electric scooters (e-scooters) are micromobility devices that provide efficient, convenient, low-carbon travel in many urban centres. While shared e-scooters were initially introduced into Canadian urban environments in 2019, increasing use of private e-scooters is being observed. As uptake of these devices increases, injuries presenting to the emergency department are common, often severe, and can be fatal.

CAEP strongly recommends the following evidence-based safety measures:

1. Age restrictions – Children under the age of 16 should not operate e-scooters.

2. Helmet use – A helmet should be worn at all times while operating an e-scooter.

3. Impairment – The dangers of operating an e-scooter while impaired by alcohol, cannabis and/or other drugs should be highlighted through awareness campaigns and existing laws enforced.

4. Passenger riding – Multiple riders on a single e-scooter are unsafe and unacceptable, particularly carrying a child passenger.

5. Speed – Shared e-scooter speeds should be regulated to <20 km/h (or lower). The speed of personal e-scooters should similarly be restricted and enforced at point of sale.

6. Public awareness– Provinces, municipalities and shared system operators should invest in education on helmet use, safe riding, and intoxication risks.

7. Regulatory tools – Where not yet in place, provincial and municipal governments should introduce mandatory helmet laws, speed restrictions, and penalties for impairment, while the federal government should leverage import controls and consumer product safety regulations to reduce the availability of unsafe devices.

8. Safe infrastructure – Strategies to improve infrastructure, such as separating motorized vehicles from e-scooters, should also be adopted. Irregular surfaces and debris represent potentially dangerous hazards for e-scooter riders and should similarly be addressed.

9. **Traffic Strategies -** We encourage municipalities to adopt a safe systems approach to road safety that includes setting safe speed limits for all motorized vehicles and reinforcing these through roadway design.

CAEP Position Statement on E-Scooters

Purpose

This statement outlines the position of Canadian Association of Emergency Physicians (CAEP) and its members on the health and safety risks posed by electric scooters (e-scooters). It provides evidence-based recommendations for injury prevention, public policy, and rider safety.

Background

Micromobility devices, particularly e-scooters, have rapidly proliferated in Canadian cities since 2019. [1] Marketed as sustainable, convenient transportation options that decongest busy cities, their adoption has coincided with a marked increase in emergency department (ED) presentations for traumatic injury.

Data from Canadian Emergency departments confirm a consistent and growing injury burden (Table).[2-4] For example, a Calgary study found that e-scooter injuries contributed approximately 3.5% of summertime traumas presenting to local emergency departments.[2] Common injuries included lower limb fractures, facial trauma, and head injuries. Helmet use was rare. Roughly 7% required surgery and 6% required admission. A similar study in Edmonton (2019–2021) documented 759 e-scooter related injuries presenting to local emergency departments.[3] Injuries included 32% fractures, 17% head injuries, 26% intoxication involvement, and only 2% helmet use. Nearly 1 in 10 required a surgical procedure within 30 days.

While shared e-scooter systems generally restrict riders to adults, children are still injured as passengers or pedestrians, particularly with private e-scooters, which have fewer restrictions and limited enforcement. Emerging pediatric data has also followed adult trends – presentations for e-scooter injuries have increased steadily every year since 2012 at the Canadian Hospital Injury Reporting and Prevention Program (CHIRPP).[4] The Canadian Pediatric Society warns of significant preventable injuries to children and youth, emphasizing that young riders lack the developmental maturity to operate these devices safely.[5] The Canadian Institute of Health Information also recently corroborated these data with a 2025 study, noting e-scooter injuries increased by 22% from 2022-2023 to 2023-2024, with children and teens leading the way with a 61% increase in injuries during this time.[6] Overall, these Canadian studies and reviews of

international literature, suggests an alarming pattern of injuries associated with e-scooter riding.[7,8]

Most recently, observational studies conducted in Edmonton in the Summer of 2024 and 2025 on more than 3500 e-scooter riders highlighted low helmet use, which varies based on ownership and rental company.[9] For example, approximately one in three riders of personal e-scooters were observed wearing helmets, and helmet use was only 12% when e-scooter companies provided a helmet with the rental. For those e-scooter systems that did not provide a helmet with the rental, helmet use was exceedingly low (< 5%). Other unlawful activities were observed: 25% were riding on sidewalks, 5% of all e-scooters had two riders, and under-age operators were observed (all forbidden in Edmonton).

Key Harms Identified

While Canadian studies examining e-scooter injuries are uncommon, the evidence for injury risk arises from international publications. Overall, there are some common features of the injuries seen in emergency departments (**Table**):

1. Head and facial injuries – high prevalence of concussions, facial fractures.
2. Limb injuries – high prevalence of fractures and joint dislocations.
3. Low helmet use – consistently under 5% across Canadian studies.
4. Substance use and intoxication – implicated in over one-quarter of adult injuries.
5. Pediatric vulnerability – injuries to children occur as riders, passengers and bystanders.
6. Healthcare burden – e-scooter injuries contribute to ambulance dispatch, ED visits, advanced imaging use, hospital admissions, surgical interventions, and follow-up clinic visits.
7. Poor outcomes – injuries resulting from e-scooter crashes can be severe, leading to hospitalization, long-term disability and even death.

National Regulations

The use of e-scooters is largely regulated through a patchwork of municipal and provincial regulations across Canada. Provinces are responsible for regulating device classifications, age limits, helmet use, speed limits, and road/path/sidewalk restrictions, and often delegate this to municipalities. As such, by-laws commonly vary across municipal borders. For example, e-scooters are currently banned for use in Toronto, although permitted in neighbouring Mississauga.

While provinces and municipalities regulate where and how e-scooters are used, the federal government has clear authority over what devices enter the Canadian market and are sold to consumers. This includes import controls, consumer product safety, labelling, battery safety, and recall powers. Federal action at the point of manufacture and sale could significantly reduce injury risk before devices ever reach public roads.

Position of CAEP

The Canadian Association of Emergency Physicians recognizes the potential convenience, affordability, role in decongesting streets and reduced carbon emissions provided by e-scooter travel. On the other hand, CAEP highlights the significant, potentially life-changing, and preventable harms associated with e-scooter use in Canada.

CAEP strongly recommends the following evidence-based safety measures:

1. Restrict Age of Use– Given the speed, power and acceleration of these devices, like motorized vehicles, children under the age of 16 should not operate e-scooters.[5] While body size and riding skill vary widely, this recommended age restriction reflects physical and cognitive development that aligns with the minimum driving age. For Canadian jurisdictions that do not yet have a legislated age restriction, this is an important first measure.

2. Encourage Helmet use – A helmet should be worn at all times while operating an e-scooter. Properly fitted, Canadian Safety Association approved helmets protect the head and face from injury when worn in bicycling and other recreational activities (e.g., skiing, skateboarding, etc.). Evidence in e-scooters is limited; however, the large majority of users are not wearing helmets and severe injuries to the head are common in Emergency Department e-scooter injury related

presentations. Extrapolating from evidence of the effectiveness of helmets while cycling, wearing a helmet could prevent or mitigate many head injuries.[10]

3. Avoid Impairment – Operating an e-scooter while impaired by alcohol, cannabis and/or other drugs is prohibited across Canada. This should be enforced and established as a norm similar to driving while intoxicated. Alcohol is a long-recognized impairing substance associated with injury. Operation of any recreational vehicle while impaired by alcohol has been shown to increase injury risk, especially when combined with other impairing substances.[11] When the Cannabis Act (Bill C-45) was passed on October 27, 2018, the use of recreational cannabis became legalized in Canada. Since that time, access and use of cannabis has risen, especially in the age group actively riding e-scooters. Acute cannabis use impairs attention, reaction time, memory, executive functioning, verbal learning and processing speed,[12,13] increasing the risk of injury when used in safety critical situations.

4. Ban Passenger riding – More than one rider on a single e-scooter is unsafe, particularly when the passenger is a child. Most e-scooter rental companies discourage passenger ride sharing, which creates riding instability and unpredictability. Despite this, studies have documented up to 5% of all E-scooter rider observations include a passenger.[9]

5. Reduce Speed – Speed is associated with injury in the event of a crash. Most rental companies regulate e-scooter speed; however, this varies among municipalities (e.g., Vancouver 25km/h; Edmonton: 15 km/h). Regulation to 20 km/h or less is recommended. The speed of personal e-scooters should similarly be restricted. Federal import controls can help limit the sale of non-speed-limited devices sold through e-commerce platforms.

6. Increase Public awareness– Surveys of e-scooter users indicate they have limited knowledge of the dangers and risks associated with e-scooter riding.[14] Provinces, municipalities and rental companies should invest in education on helmet use, safe riding, and intoxication risks.

7. Regulatory enforcement – Currently, the regulations for e-scooter use vary widely across Canada. Provincial and municipal governments should introduce mandatory helmet laws, speed restrictions, and intoxication penalties where they do not yet exist. The federal government should similarly use its authority around the manufacture and sale of the e-scooters themselves.

8. Improve infrastructure – Strategies to improve active transportation infrastructure, such as protected bicycle/micromobility lanes, should be adopted and prioritized. Additionally, irregular surfaces and debris represent potentially dangerous hazards for e-scooter riders; early Spring cleaning and road repairs will improve safety.

9. Traffic Strategies – Many cities are implementing traffic calming strategies (e.g., reduced speed limits, round-abouts, adaptive signaling, etc.) which make urban roads safer for all road users. We encourage municipalities to adopt a safe systems approach to road safety that includes setting safe speed limits for all motorized vehicles and reinforcing these through roadway design.

Next Steps

E-scooter-related injuries have important impacts on clinicians, health care institutions, and Canadian communities. Most importantly, they can have devastating impacts on patients and their families.[2-4] All CAEP members should actively advocate for safe travel and enjoyment for community members engaging in active transportation and recreational activities in their communities. Future research is required to expand the evidence base relating to e-scooter injuries in children and adults. Collaborations between municipalities and e-scooter rental companies on novel interventions designed to mitigate injuries and promote the safe use of e-scooters should be encouraged. Anecdotally, many are aware of specific interventions which have been developed and trialed; however, few have been formally evaluated. These include restricted travel zones, reduced speed zones, skill-testing questions that prevent riders who are impaired from renting scooters, and other novel strategies. We encourage sharing of these interventions and support formal evaluation of their effectiveness.[15] At the very least, Canadians should be made aware of the considerable risks associated with e-scooter riding through educational programs, especially parents of young children.[5,16] Finally, media has a role to play in highlighting the approach to safe e-scooter riding.[17]

Conclusion

E-scooter use is increasing dramatically in many Canadian communities and e-scooter-related injuries are common, potentially severe, and largely preventable. As frontline physicians witnessing their health and societal costs, CAEP calls for urgent and consistent legislative and public health measures to reduce the burden of e-scooter-related trauma in Canada. Evidence suggests children are increasingly exposed to these injury risks and urgent action is needed.[16]

Selective References

1. Shared micromobility in the U.S. and Canada 2023.: NACTO (North American cities and transit agencies); 2023. Available from: https://nacto.org/publication/shared-micromobility-report-2023/(accessed February 5, 2026).
2. Sheikh M, Islam A, Kroeker N, Walia H, Koger K, Lang E, Sedor A, VandenBerg S. Electric scooter related injuries in Calgary emergency departments. CJEM. 2022;24:735-741.
3. Bristow E, Marin J, Couperthwaite S, Picard C, Yang E, Rowe BH. Electric scooter injury and trauma in Edmonton: A multicentre prospective and retrospective observational study. Can J Surg. 2025;68(2):E160-E168.
4. Desiateryk S, Zutrauen S, Wang Z, Iynkkaran I, Ghandour L, McFaull SR, Butler G, Cheesman J, Champagne A, Do MT. Characteristics of outdoor motorized scooter-related injuries: Analysis of data from the electronic Canadian Hospitals Injury Reporting and Prevention Program (eCHIRPP). Health Promot Chronic Dis Prev Can. 2022 Oct;42(10):450-454. doi: 10.24095/hpcdp.42.10.05. PMID: 36223161; PMCID: PMC9584175.
5. Rosenfield D, Beno S. E-scooter and E-bike Warning. 2023. Available at: https://cps.ca/en/blog-blogue/e-scooter-and-e-bike-warning (accessed February 5, 2026).
6. Canadian Institute for Health Information. Injury and Trauma Emergency Department and Hospitalization Statistics, 2023–2024. Ottawa, ON: CIHI; 2025. (accessed February 5, 2026)
7. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Berenbaum E. Escooter injuries. Toronto, ON: Queen's Printer for Ontario; 2021 (accessed February 5, 2026).
8. Toofany M, Mohsenian S, Shum LK, Chan H, Brubacher JR. Injury patterns and circumstances associated with electric scooter collisions: a scoping review. Inj Prev. 2021 Oct; 27(5):490-499. doi: 10.1136/injuryprev-2020-044085
9. Kristel-Grinde E, Zalitach G, Leysk N, Herle E, Stark P, Couperthwaite S, Yang E, Bristow E, Belton K, Rowe BH. Risk-taking behaviours while riding electric scooters in one Canadian urban region. 2026 International Conference on Emergency Medicine. Montreal, PQ. June 2025.
10. Thompson DC, Rivara FP, Thompson R. Preventing bicycle injuries: a systematic review of the effectiveness of bicycle helmet legislation. Inj Prev. 2009; 15(5):320-324.
11. Simmons SM, Caird JK, Sterzer F, Asbridge M. The effects of cannabis and alcohol on driving performance and driver behaviour: A systematic review and meta-analysis. Addiction. 2022; 117:1843–56. https://doi.org/10.1111/add.15770.
12. Kroon E, Kuhns L, Cousijn J. The short-term and long-term effects of cannabis on cognition: recent advances in the field. Current Opinion in Psychology. 2021;38:49-55. DOI: https://doi.org/10.1016/j.copsyc.2020.07.005.
13. Bourque J, Potvin S. Cannabis and cognitive functioning: from acute to residual effects, from randomized controlled trials to prospective designs. Front Psychol. 2021;12:596601. DOI: 10.3389/fpsyt.2021.596601
14. Burt N, Ahmed Z. E-scooter attitudes and risk-taking behaviours: an international systematic literature review and survey responses in the West Midlands, United Kingdom. Front Public Health. 2023 Oct 13;11:1277378. doi: 10.3389/fpubh.2023.1277378. PMID: 37900037; PMCID: PMC10613103.
15. Buongiorno L, Stellacci A, Cazzato G, Caricato P, De Luca BP, et al. Slow and steady wins the race: A comparative analysis of standing electric scooters' European regulations integrated with the aspect of forensic traumatology. Sustainability. 2022; 14(10): 6160. doi.org/10.3390/su14106160
16. Flaherty MR, Rosenfield A, Rosenfield D. Pediatric injuries among those using active transportation and micromobility devices. Ped Clinics of NA. 2025; 72(6):1097-1109.

17. Deadly Impact: The Rise of E-Scooter Injuries. CIHI Podcast. July 22, 2025.