

Electric scooters: a crisis and opportunity

Johnathon P Ehsani , Ava Clara Eshragi, Andrew Hellinger

To cite: Ehsani JP, Eshragi AC, Hellinger A. Electric scooters: a crisis and opportunity. *Trauma Surg Acute Care Open* 2024;**9**:e001396. doi:10.1136/tsaco-2024-001396

In their paper published in this issue of *Trauma Surgery & Acute Care Open*, Luceri and colleagues¹ document e-scooter-related traumas that were presented to an Italian Orthopedic Center emergency department during 6 months in 2021. This retrospective case review was paired with a literature review describing the nature and cause of injuries sustained from e-scooter use. Their findings offer insight into the specific mechanisms and injury sites of e-scooter-related traumas and shed light on the epidemiology of the injuries that are sustained. Their retrospective case review cannot capture exposure to e-scooter usage, which is crucial in determining risk. For example, their finding that most injuries occurred during the day may be a function of greater scooter use during those hours rather than daytime riding being riskier. The authors' findings were largely corroborated by their literature review which found similar injury profiles among e-scooter riders across five countries. The authors conclude that while e-scooters are an inexpensive and climate-friendly mode of transport, mitigation of e-scooter injury risk is necessary through the implementation of effective policy.

E-scooters represent a new source of injury but also an opportunity for new types of interventions. Rider education, training, and laws are necessary but not sufficient to address the injury risks that are associated with e-scooter use. An emerging approach to road safety, known as safe systems, aims to eliminate road injuries through better design of the road system itself,² creating roadways and vehicles that are inherently safe instead of relying on road users to promote safety.³ For e-scooters, a safe systems approach would modify the roadway environment to include dedicated, protected lanes for e-scooter riders. Cities regulating the use of e-scooters could use GPS monitoring systems to limit the speed a scooter can travel in high-risk areas. The National Mall in Washington, DC and Baltimore City's Inner Harbor in the USA are examples of 'geo-fenced' areas where e-scooter speeds are limited to a few miles per hour to protect the safety of both the rider and the pedestrians. Recognizing that access to transportation is a social determinant of health,

policymakers can also address gaps in mobility through regulations that require shared e-scooters to be distributed in a way that increases e-scooter access in underserved neighborhoods.⁴

As Luceri *et al* highlight in their article, e-scooters are here to stay. Ongoing demand for their use indicates that these vehicles are addressing unmet mobility needs, particularly for young people. Through a safe systems approach, policy makers and injury prevention practitioners can balance the goals of maximizing mobility while optimizing safety.

Contributors JE and ACE drafted the article. AH provided critical feedback and revisions.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; internally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Johnathon P Ehsani <http://orcid.org/0000-0001-9869-1679>

REFERENCES

- 1 Luceri F, Monteleone V, Randelli P. Electric Scooter related Orthopaedic injuries: the experience of an Italian Orthopaedic center and literature review. *Trauma Surgery & Acute Care Open* 2021.
- 2 Michael JP, Wells NM, Shahum L, Bidigare-Curtis HN, Greenberg SF, Xu T. Roadway safety, design & equity: A paradigm shift. *Journal of Transport & Health* 2021;23:101260.
- 3 Ehsani JP, Michael JP, MacKENZIE EJ. The future of road safety: challenges and opportunities. *Milbank Q* 2023;101:613–36.
- 4 Baltimore City Department of Transportation. Dockless vehicles for hire: rules and regulations. 2019. Available: <https://transportation.baltimorecity.gov/sites/default/files/2019%20Rules%20&%20Regs%20SIGNED%20FINAL.pdf>



► <http://dx.doi.org/10.1136/tsaco-2023-001197>

© Author(s) (or their employer(s)) 2024. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

Correspondence to

Dr Johnathon P Ehsani; johnathon.ehsani@jhu.edu