

# ACRS Policy Position Statement

## Pedestrian Safety

### Summary

Walking is the oldest, most common, inclusive, and affordable mode of transport for short distance trips, and is associated with a range of health, well-being, economic and environmental benefits. Pedestrians make up the largest group of road users because everyone, at some point, is a pedestrian. However, pedestrians are also the most vulnerable to road injury. The past decade has seen little change in pedestrian safety, with key risks to people who walk including: 1) Interactions with motor vehicles, particularly when crossing higher speed or poorly lit streets; 2) Poor connectivity, design, suitability and/or conditions contributing to risky pedestrian behaviours; 3) Variations in definition and rules around pedestrians; 4) Lack of adequate data and analysis, including walking infrastructure, pedestrian movement, falls and crash data, and; 5) Gaps in vehicle design and testing standards regarding pedestrian safety features. Specific pedestrian safety action plans based on systems thinking are needed to contribute towards the global goal of a 50% reduction in road trauma by 2030. We need to ensure safe road systems for pedestrians through policies that foster safe urban and rural road infrastructure design and engineering; set adequate speed limits supported by appropriate speed management measures; enable multimodal transport and active mobility; and safe hazard free pedestrian infrastructure including rail level crossings.

### Key policy positions

1. All levels of government must prepare for future sustainable mobility trends towards increased active transport, including increased pedestrian travel.
2. Improved definitions of *pedestrian* in road authority and hospital data to ensure evidence-informed safety for people walking as distinct from users of high-speed mobility devices.
3. Pedestrian safety specific action plans must be developed and implemented, with ongoing monitoring and evaluation.
4. Pedestrian infrastructure safety needs to be inclusive of all age and ability groups.

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## Policy problem

Broadly speaking, everyone is a pedestrian at least some of the time they travel in and around the road environment. Walking is promoted for both physical health and as part of active travel towards sustainable transport futures. However, pedestrians are the most vulnerable to road injury. Globally, the World Health Organization (WHO) estimates there are approximately 12 million pedestrian traffic-related injuries annually, and pedestrians represent about one-quarter of the 1.2 million annual road-related deaths.(1, 2) Pedestrian deaths are rising at nearly twice the rate of all other road traffic fatalities.(3)

A major challenge to pedestrian safety is the definition of a pedestrian. Historically, the term was used to designate people walking on footpaths and crossing roads by foot. This extended to people requiring mobility aids such as crutches, walking frames, and wheelchairs. Wheeled toys were added to account for rollerskates and skateboards with speeds limited to 10 km/h. However, now pedestrian spaces include riders of devices capable of much higher speeds including electric bicycles and (micro-)mobility devices such as golf-cart style vehicles, e-scooters and other e-rideables. Without a separate category, these diverse road users are often classed as ‘pedestrians’ in road authority and hospital injury documentation and databases. Governmental regulations allowing and enabling these higher-speed vehicles to mix with people walking on footpaths and shared paths impedes pedestrian safety and violates Safe System principles. This policy position statement focuses on *pedestrians* as people walking, including those using walking aids such as wheelchairs and non-motorised devices, is inclusive of all ages and abilities and excludes the other common footpath users.

## Principles underpinning ACRS position

- Fatal or serious injury due to travel in the road environment is preventable and unacceptable.
- Inclusive collaboration among government agencies, communities and broader stakeholders is critical in implementing relevant and effective data collection, analysis, design and implementation of road safety initiatives.
- Road systems must be designed to provide safety to people walking – of all ages and abilities – and be equitable to that afforded to other road users (redressing prioritisation of motorised vehicle users).
- Increased active travel supports multiple United Nations (UN) Sustainable Development Goals: *Traffic safety (SDG 3); Transportation mode share (SDG 9); Air pollution (SDG 11); Equitable access to public transport and public open spaces (SDG 10 and SDG 11); Reductions in carbon emissions (SDG 13)*.(4)

## Evidence base

UN resolutions have noted that road safety requires addressing broader issues of equitable access to mobility and the promotion of sustainable modes of transport.(5) This includes the need to implement a systems-based approach with emphasis on public transport, walking and segregated cycling, including bike-sharing services, safe pedestrian infrastructure, cycleways and level crossings, especially in urban areas.(6)

Walking is a readily accessible and simple health behaviour that can reduce rates of chronic disease, including obesity, coronary heart disease and diabetes, and improve cognitive function, mental health and sleep,(1) as well as other benefits in equity and emissions reduction.(7, 8) Nonetheless, pedestrians are representative of a neurodiverse population with varying physical mobility capabilities and levels of health, from young children through to senior adults. The absence of protections afforded by vehicles and personal protective equipment renders pedestrians as the most vulnerable road users to road injury.

In the event of a crash, the risk of death or serious injury is amplified for a pedestrian when compared to someone travelling in a car and escalates at impact speeds of between 30 to 40 km/h.(1, 9) For every 1 km/h above 30 km/h, the chance of pedestrian death increases by 11%.(10) Strategic speed management approaches in some countries includes 30 km/h zones in areas with high pedestrian activity.(11)

Pedestrians are also at risk of collisions with cyclists and riders of other (micro-)mobility devices travelling at higher speeds on footpaths and shared paths. The difference in kinetic energy exchange between a pedestrian and a cyclist is comparable to that between a cyclist and a car travelling at 50 km/h.(12) Cyclist-pedestrian and scooter/skateboard-pedestrian type collisions disproportionately impact children and seniors.(13) Separation is needed in high-density areas.

High risk pedestrian groups include for example the youngest and oldest road users, and those with impairments to hearing and/or vision. Young children ( $\leq 10$  years of age) are particularly vulnerable due to their road strategies, skills and understanding not being fully developed, and their height can be under vehicle operators' fields of view.(14, 15) School zones excluding motorised vehicles or limited to 30-40km/h are key measures in child pedestrian safety.(16, 17) Senior pedestrians are also more at risk due to general increased frailty, diminished perceptual judgement, slower decision times, slower walking speeds,(18) and are at higher risk of falls. Falls can affect all age groups but fall injury rates are higher for older pedestrians (especially  $>75$  years of age) and are expected to increase as the population ages.(18-20) Falls on footpaths, kerbs, or streets are often attributed to uneven surfaces, tripping on obstructions and stepping up or down from heights. Better design and maintenance of walking infrastructure, such as reducing changes in grades (e.g., raised crossings), appropriately graded and aligned ramps, improved crossing facilities and kerbs, reduce risk. Kerbs should be barrier profile simple step design, rather than wide sloping designs that need to be 'stepped over'(21) while crossover ramp designs should facilitate wheelchair, pram, and mobility devices.(22)

Much of the current investment in major road projects does not meet the transport needs, including personal safety needs of certain pedestrian demographics (e.g., women and those in lower socio-economic areas).(23, 24). Gender Impact Assessments' (GIAs) are one systematic tool to help address this.(25, 26) Motor vehicle traffic is often perceived as a barrier to walking, with vehicle speed the leading concern, many roads have unmaintained footpaths, or are lacking footpaths altogether,(27, 28) and inadequate lighting can also contribute to pedestrians feeling unsafe to walk at night, particularly women. A cultural mindset that roads are built for cars and should not be shared with others, or that cars must maintain priority(29) contributes to road designs that largely overlook the needs of pedestrians. The United Nations Environment Programme recommends governments *"set aside at least 20% of the total transport budget to fund [non-motorised transport] programmes at national and city level"*.(30)

Jurisdictions also vary in the rules governing pedestrian safety and priority in the road environment in ways that can be unclear and, in some cases, unintuitive. For example, obligations for on-road vehicle drivers/riders to give way at intersections at slip lanes and at crossings can apply when the pedestrian is "at or near" or "on or entering" a road, and without defining what those terms mean. Whether pedestrians do or do not have priority at intersections with roundabouts can be confusing, especially when pedestrian refuge islands are present.(31) Whether pedestrians and/or on road traffic adhere to the pedestrian safety rules can also differ culturally, across urban to rural communities and high to low-to-middle income countries.

A lack of adequate data can limit the development of effective programs. Collected data should include:

- walking infrastructure data (e.g. effective widths, kerb types and ramps, informal crossing points and sufficient crossing times),
- pedestrian movement data (e.g. flows and composition, children, elderly and people with disabilities, including by gender), and
- crash data (e.g. crash location, crash infrastructure, crash severity and antecedent events).(32-34)

Data are limited due to pedestrians admitted to hospital often not being included in police records of crashes, where information about the events that resulted in their injuries is gathered.

While vehicle design standards and testing protocols focused on pedestrian safety exist, their use is not yet universal. For example, Australia has not adopted UN Regulation 127 (R127)/Global Technical Regulation 9 (GTR 9) Pedestrian Protection as a mandatory testing requirement for all new and imported (new or otherwise) vehicles. Add-on accessories, such as large and heavy bull bars, also increase injury severity to impacted pedestrians. Bull bars are commonly believed (and marketed) to afford better vehicle occupant protection in the event of a large animal strike, which is rarely applicable and largely disproved.(35)

### **Recommended policy actions**

1. Governments to recognise, explicitly support, and equitably fund, road environments that encourage a sustainable, healthy, active transport future with walking a legitimate and necessary mode of transport for all people of all abilities.
2. Governments to review, revise and/or implement all road rules that relate to pedestrians to remove any ambiguity for road users.
3. Standardise definitions of pedestrian within road authority and hospital injury reporting.
4. All levels of government involved in planning, design, construction and maintenance of roads and roadsides, to provide pedestrians of all ages and abilities:
  - Priority commensurate with that afforded to vehicle drivers in all environments, including shared zones. Pedestrians prioritised in the road design, road space and hazard minimisation process. Connectivity, suitability and condition of pedestrian networks safe for all pedestrians, including the separation from bicycles and (micro-)mobility devices where possible.
  - Speed limits of 30 km/h in the highest-risk pedestrian zones, including around schools, busy shopping strips, and where diverse modes of active and motorised (micro-)mobility road users mix and vehicular traffic cannot be separated, especially at night.
  - Reduce urban residential default speeds to a maximum of no greater than 30 km/h.
  - All urban roads and streets have at least one sealed footpath and adequate lighting when: motorised vehicles travel at speeds above 40 km/h at night; access roads in rural areas have high pedestrian use, especially in curved sections and where pedestrians can be obscured to drivers. Footpath locations should be away from the kerb and traffic wherever possible.
  - Road safety audits including critical pedestrian data to inform works programs, including fatal and serious injury data, observational studies, and community and local precinct/government input.
  - Planning schemes include adequate pedestrian infrastructure and design including priority at driveways, especially in residential and commercial zones.
  - Eliminate conflicting right-of-way/priority movements at signalised intersections and elsewhere between pedestrians and motorised vehicles.
  - Routine collection of adequate data on pedestrian volumes, injuries and crashes.

- Implement technology that improves pedestrian wait and crossing time amenity.
5. Minimum safety standards for vehicles for pedestrian safety, including (but not limited to):
    - UN Regulation 127 (R127)/Global Technical Regulation 9 (GTR 9) Pedestrian Protection as a mandatory requirement for all new and imported (new or otherwise) vehicles.
    - Technologies to warn the heavy vehicle drivers of any obstacles or other road users within the forward blind spot of the truck/bus.
  6. Governments to give higher priority to driver and rider education and enforcement regarding their responsibilities towards pedestrians.

### ACRS actions

1. Advocate for speed limits, vehicle safety standards, planning and design to emphasise pedestrian safety, including segregation and interactions with motor vehicles, cyclists and (micro-)mobility devices, lighting, fall prevention with road, kerb, and footpath design.
2. Advocate for improved collection of pedestrian crash, injury and behavioural data to identify safety issues and evaluate safety interventions.
3. Advocate for adequate funding for infrastructure and treatment programs that are considerate of the needs of all people of all abilities and so provide safe spaces that are inclusive and accessible for all people walking.
4. Advocate for harmonised and clearer road rules to promote safer walking environments.
5. Promote appropriate education targeted at all actors in the chain of responsibility for the system, coupled with appropriate enforcement, that enhances and prioritises pedestrians over other forms of transport.

### References

1. WHO Regional Office for Europe. Walking and cycling: latest evidence to support policy-making and practice. <https://www.who.int/europe/publications/i/item/9789289057882>; World Health Organization; 2022.
2. World Health Organization. Global status report on road safety 2023. <https://iris.who.int/bitstream/handle/10665/375016/9789240086517-eng.pdf?sequence=1>; WHO; 2023.
3. World Health Organization. Pedestrian safety: a road safety manual for decision-makers and practitioners. <https://www.who.int/publications/i/item/9789240072497>; WHO; 2023.
4. United Nations Department of Economic and Social Affairs. Sustainable Development <https://sdgs.un.org/goals>; UN; [cited 2022 20 July]. Available from: <https://sdgs.un.org/goals>.
5. United Nations General Assembly. Improving global road safety. Resolution adopted by the General Assembly on 12 April 2018: A/RES/72/271. <https://docs.un.org/en/a/res/72/271>; UN; 2018.
6. United Nations General Assembly. Political Declaration of the high-level meeting on improving global road safety. Resolution adopted by the General Assembly on 30 June 2022 A/RES/76/294. <https://docs.un.org/en/A/RES/76/294>; UN; 2022.
7. Mindell JS, Watkins SJ. Transport, health and inequality. An overview of current evidence. *Journal of Transport & Health*. 2024;38.
8. van Daalen KR, Romanello M, Rocklov J, Semenza JC, Tonne C, Markandya A, et al. The 2022 Europe report of the Lancet Countdown on health and climate change: towards a climate resilient future. *Lancet Public Health*. 2022;7(11):e942-e65.
9. Grzebieta R, Rechnitzer G, Olivier J. Safe travel for pedestrians: reduce 50 km/h default limit to 40 km/h. In: Bates L, Johnson M, editors. 2023 Australasian Road Safety Conference; 19-21 September 2023; Cairns: Australasian College of Road Safety; 2023.
10. Hussain Q, Feng H, Grzebieta R, Brijs T, Olivier J. The relationship between impact speed and the probability of pedestrian fatality during a vehicle-pedestrian crash: A systematic review and meta-analysis. *Accident Analysis & Prevention*. 2019;129:241-9.
11. Yannis G, Michelaraki E. Review of City-Wide 30 km/h Speed Limit Benefits in Europe. *Sustainability*. 2024;16(11).

12. Grzebieta RH, McIntosh AM, Chong S. Pedestrian-Cyclist Collisions: Issues and risk. 2011 Australasian College of Road Safety Conference; 1-2 September 2011; Melbourne2011.
13. Victoria Walks. Shared paths - the issues.  
[https://www.victoriawalks.org.au/Assets/Files/Shared\\_paths\\_the\\_issues.pdf](https://www.victoriawalks.org.au/Assets/Files/Shared_paths_the_issues.pdf): Victoria Walks; 2015.
14. Congiu M, Whelan M, Oxley J, Charlton J, D'Elia A, Muir C. Child pedestrians: Factors associated with ability to cross roads safely and development of a training package. MUARC Report No. 283.  
[https://www.monash.edu/\\_data/assets/pdf\\_file/0006/216969/Child-Pedestrians-Factors-associated-with-ability-to-cross-roads-safely-and-development-of-a-training-package.pdf](https://www.monash.edu/_data/assets/pdf_file/0006/216969/Child-Pedestrians-Factors-associated-with-ability-to-cross-roads-safely-and-development-of-a-training-package.pdf): Monash University Accident Research Centre; 2008.
15. Stevenson M, Sleet D, Ferguson R. Preventing Child Pedestrian Injury:A Guide for Practitioners. American Journal of Lifestyle Medicine. 2015;9(6):442-50.
16. Lambert F, Venter C. Testing the impact and feasibility of 30 km/h speed limit zones at schools. 34th Southern African Transport Conference (SATC 2015); 6-9 July 2015; Pretoria, South Africa2015.
17. Graham A, Sparkes P. Casualty reductions in NSW associated with the 40 km/h school zone initiative. 2010 Australasian Road Safety, Research, Policing and Education Conference; 31 August-3 September 2010; Canberra, Australia2010.
18. Oxley J, Fildes B, Ihsen E, Charlton J, Day R. Do older pedestrians make safe road crossing decisions based on gap judgements? Road Safety Research, Policing, and Education Conference; Wellington, New Zealand1998.
19. Oxley J, O'Hern S, Burt D, Rossiter B. Fall-related injuries while walking in Victoria.  
[https://www.victoriawalks.org.au/Assets/Files/FINAL\\_Falls\\_Research\\_designed.pdf](https://www.victoriawalks.org.au/Assets/Files/FINAL_Falls_Research_designed.pdf): Victoria Walks; 2016.
20. Rod JE, Oviedo-Trespalacios O, Senserrick T, King M. Older adult pedestrian trauma: A systematic review, meta-analysis, and GRADE assessment of injury health outcomes from an aggregate study sample of 1 million pedestrians. Accident Analysis & Prevention. 2021;152:105970.
21. Fanning R, Veith G, Whitehead M, Aumann P. Guide to Road Design Part 3: Geometric Design Edition 3.4. Austroads report AGRD03-16. [https://austroads.gov.au/publications/road-design/agrd03/media/AGRD03-16\\_Guide\\_to\\_Road\\_Design\\_Part\\_3\\_Geometric\\_Design\\_Ed3.4.pdf](https://austroads.gov.au/publications/road-design/agrd03/media/AGRD03-16_Guide_to_Road_Design_Part_3_Geometric_Design_Ed3.4.pdf): Austroads; 2021.
22. Queensland Department of Transport and Main Roads. Guideline: Treatment options to improve safety of pedestrians, bicycle riders and other path users at driveways. Brisbane: Queensland Government; 2021.
23. Woodcock J, Banister D, Edwards P, Prentice AM, Roberts I. Energy and transport. The Lancet. 2007;370(9592):1078-88.
24. Zhang M, Bandara AK. Understanding Pedestrians' Perception of Safety and Safe Mobility Practices. Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems. 2024.
25. European Institute for Gender Equality. Gender Impact Assessment: EIGE; 2026 [cited 2026 12 April]. Available from: [https://eige.europa.eu/gender-mainstreaming/toolkits/gender-impact-assessment/what-gender-impact-assessment?language\\_content\\_entity=en](https://eige.europa.eu/gender-mainstreaming/toolkits/gender-impact-assessment/what-gender-impact-assessment?language_content_entity=en).
26. The Equality Institute. Gender impact assessment toolkit. <https://apo.org.au/sites/default/files/resource-files/2021-01/apo-nid310524.pdf>: Commission for Gender Equality in the Public Sector.
27. Soto GW, Whitfield GP, Webber BJ, Omura JD, Chen TJ, Zaganjor H, et al. Traffic as a barrier to walking safely in the United States: Perceived reasons and potential mitigation strategies. Prev Med Rep. 2022;30:102003.
28. Fishman E, Naseri M, Davies L, Tran J, Katsu T. Prioritising Active Transport. Austroads Report AP-R711-24. [https://austroads.gov.au/\\_data/assets/pdf\\_file/0031/653368/AP-R711-24\\_Prioritising\\_Active\\_Transport.pdf](https://austroads.gov.au/_data/assets/pdf_file/0031/653368/AP-R711-24_Prioritising_Active_Transport.pdf): Austroads; 2024.
29. Job RFS. Overcoming barriers to pedestrian safety. Australasian College of Road Safety National Conference: A Safe Systems Approach: Expanding the Reach; Sydney2012.
30. UN Environment. Global Outlook on Walking and Cycling 2016.  
<https://wedocs.unep.org/rest/api/core/bitstreams/bfecc32c-16f2-40cd-b1b7-93257c942f69/content>: UN Environment; 2016.
31. Sharma SN, Dehalwar K. A Systematic Literature Review of Pedestrian Safety in Urban Transport Systems. Journal of Road Safety. 2025;36(4).
32. Bhowmick D, Winter S, Stevenson M, editors. Using Georeferenced Twitter Data to Estimate Pedestrian Traffic in an Urban Road Network. International Conference Geographic Information Science; 2021.
33. Bolten N, Mukherjee S, Sipeeva V, Tanweer A, Caspi A. A pedestrian-centered data approach for equitable access to urban infrastructure environments. IBM Journal of Research and Development. 2017;61(6):10:1-:2.
34. Koo BW, Guhathakurta S, Botchwey N. Development and validation of automated microscale walkability audit method. Health & Place. 2022;73:102733.
35. Anderson RWG, van den Berg A, Ponte G, Streeter L, McLean A. Testing the Pedestrian Safety of Bull Bars: Methods and Results. Journal of the Australasian College of Road Safety. 2008;19(1):35-43.

