



# **The Government's transport plans work against our health**

11 April 2024

Caroline Shaw, Ed Randal

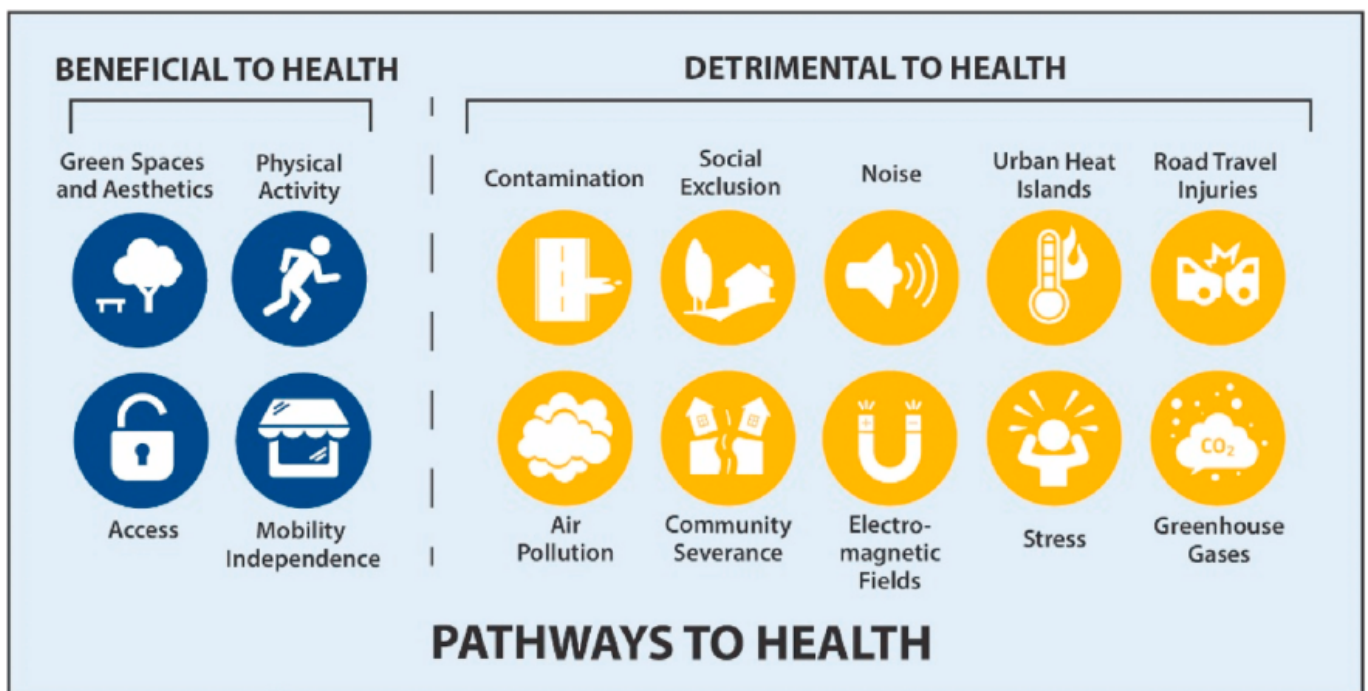
# Summary

The draft Government Policy Statement (GPS) on Land Transport 2024-34 neither supports the health and wellbeing of the population nor addresses the transport challenges of the 21st century. The current transport system causes thousands of preventable premature deaths and tens of thousands of hospitalisations and doctor visits every year through air pollution, injury, noise pollution and physical inactivity. The policies outlined in the draft GPS 2024 are, as a package, likely to worsen the already high levels of illness, disability, and early death in our communities caused by the transport system. This will have considerable implications for an already overburdened health system, as well as social, economic and environmental costs to society. The lack of plausible policy to reduce transport greenhouse gas emissions will further contribute to poor health through the impacts of climate change on the population.

In summary, the proposed policies will erode what current health benefits there are from transport, fail to deal with current health harms and will likely exacerbate these health harms in the short and long term.

Transport is a major determinant of health in Aotearoa New Zealand (NZ) through a wide range of pathways (see Figure 1 below).<sup>1</sup> Transport can both improve health (e.g. by facilitating access employment and healthcare) and cause significant harm (e.g. through air pollution exposure). These benefits and harms are not spread evenly across the population. Some groups, such as Māori, older people and more socioeconomically deprived people, gain fewer benefits from the system, suffer more of the adverse consequences and themselves contribute least to the harms of the system (as they drive less).<sup>2-11</sup>

**Figure 1: Pathways to health from the transport system**



Source: Glazner et al, 2021<sup>1</sup>

Each of the pathways in Figure 1 leads to a wide range of health, social and economic impacts. For example, if we take physical activity as a specific example, physical activity is associated with reductions in cognitive decline (40% reduction), risk for type 2 diabetes (35%), hypertension (33%), depression (48%), bone fracture risk (66%), breast cancer risk (20%), coronary heart disease and stroke (25%), and colorectal cancer (19%).<sup>13</sup> However, currently, less than half of adults and adolescents in NZ are getting sufficient physical activity to stay healthy,<sup>14,15</sup> and 40% of children are not sufficiently active for health.<sup>14</sup> Low physical activity was directly accountable for 920 deaths in 2019 and over 11,000 years of life lost in NZ.<sup>16</sup>

People who use active transport modes, like walking, cycling, and public transport, are more likely to meet physical activity recommendations for health, compared to those who drive.<sup>17,18</sup> Nearly 60% of adult New Zealanders get daily physical activity from walking;<sup>19</sup> much of which occurs in their local neighbourhoods. When people switch to active transport modes, the additional physical activity they get almost always increases their overall amount of activity (i.e. not substituted from physical activity elsewhere).<sup>20</sup> Thus, active transport is the most important opportunity available to New Zealanders to increase their physical activity to adequate levels for health and the transport environment is key to facilitating or hindering this.

## **The health and wellbeing harms of the current transport system are extensive and significant.**

In NZ the scope of death and disease caused by the transport system currently is substantial (at least on par with the harm from tobacco).<sup>26</sup> Additionally, compared to global peers, we have extremely high levels of harm for both transport injury and transport sourced NO<sub>2</sub> air pollution. (See [Appendix 1](#) for a summary of what we know about the health harms from transport in NZ).

These health harms have significant economic impacts. The annual social costs of the health impacts just from the air pollution harm from vehicles is estimated at more than \$10.5 billion.<sup>27</sup> The social costs of road traffic injury are about another \$11.5 billion annually.<sup>28</sup>

Greenhouse gas emissions from the transport sector in NZ contribute to further health loss, through climate change. Climate change itself is considered one of the greatest health challenges of the 21st century and is impacting on a wide range of health conditions through weather events (e.g. floods and landslides) as well as altering ecosystems thus impacting food supply, costs and diets. There are also indirect effects of climate change that impact on health, such as loss of employment and forced migration.<sup>31</sup>

## **The implications of the draft GPS 2024 for health and health equity**

The draft GPS 2024 takes an extremely narrow view of health, focussing solely on injury, with no mention of other pathways to health such as transport related air pollution, physical inactivity and noise pollution. Climate change is mentioned briefly, but the draft GPS 2024 does not offer a plausible approach to reducing transport emissions and thus avoiding adverse health (and economic) consequences of transport emissions. Transport equity and exclusion are not mentioned at all.

Our full [submission](#) has a detailed critique of how the proposed policies will impact on

health, but, in summary, the existing body of transport-health evidence suggests that the policies and approach outlined in the draft GPS 2024:

- May increase vehicle deaths and serious injuries.
- Will increase walking and cycling deaths and serious injuries.
- Will reduce transport related physical activity.
- Will increase transport sourced air pollution.
- May increase noise pollution.
- Will increase transport exclusion for a range of different groups.
- Will not achieve the post 2025 transport sector greenhouse gas emission budgets needed to achieve net zero by 2050 outlined in the Emissions Reduction Plan (in combination with other decarbonisation policies in transport).

## Where to from here?

The health consequences of the current transport system are not inevitable; they are the result of specific policy choices. We would argue that almost all the health harms of the current transport system are avoidable. And there are examples of other jurisdictions with successful transport systems where health and wellbeing are a priority; injury rates are substantially lower, and transport related physical activity higher than those in NZ.

Unfortunately, despite the evidence that health does not need to be compromised to achieve transport outcomes, the policy choices outlined in the draft GPS 2024 will perpetuate the extensive health harms from transport already present and risk worsening them. In our [submission](#), we made a wide range of recommendations for changes to the draft GPS 2024 to make health and wellbeing central to transport decision making (see [Appendix 2](#)). However, fundamentally, if the transport system does not support New Zealanders to lead healthy and sustainable lives, then it cannot “effectively underpin NZs economic prosperity” in the 21<sup>st</sup> century.

## What’s new in this Briefing

- The adverse health and wellbeing impacts of transport in Aotearoa/NZ are substantial and are contributing to pressure on an overloaded healthcare system.
- The health impacts of transport are largely preventable through policy action.
- The draft GPS 2024 will perpetuate the high level of current health harms and may worsen them.

## Implications for public policy

- The draft GPS 2024 should include health and wellbeing (in all the ways that transport impacts on it) as a key objective of the transport system.
- The draft GPS 2024 should include reducing greenhouse gas emissions as a key objective of the transport system.

## Authors details

[Associate Professor Caroline Shaw](#) University of Otago Wellington | Te Whare Wānanga o Otāgo ki Te Whanga-nui-a-Tara

[Dr Ed Randal](#) – Research Fellow, New Zealand Centre for Sustainable Cities, University of Otago Wellington | Te Whare Wānanga o Otāgo ki Te Whanga-nui-a-Tara

This Briefing summarises key points from a [submission on the Draft Government Policy Statement on Land Transport 2024-34](#) ([tinyurl.com/gpslt2024](https://tinyurl.com/gpslt2024)). This Briefing is based on work done by 22 authors for the submission.

## Appendix 1

What we know about health damage caused annually by the transport system:

- Health loss from road injury, physical inactivity and transport sourced PM<sub>2.5</sub> (one of the two main transport air pollutants) is comparable to health loss from tobacco or obesity and results in billions of dollars needing to be spent by the health system. Transport related health loss contributes 2-3% of the differences in life expectancy between Māori and non-Māori in Aotearoa/NZ.<sup>26</sup>
- Recent Aotearoa/NZ-specific estimates of the health effects of transport related NO<sub>x</sub> (nitrogen oxides, the other main transport sourced air pollutant) air pollution show that, annually, 2000 premature deaths are caused just from this pollutant alone, along with at least 8,500 hospitalisations and 13,000 episodes of asthma in children.<sup>27</sup> These are globally high figures for NO<sub>x</sub> related health harm.<sup>30</sup>
- One assessment suggested transport-related noise causes around 60 deaths annually in Aotearoa/NZ.<sup>30</sup>

## Appendix 2

We recommend that the GPS 2024 is revised to:

1. Retain **healthy** and safe people as a key objective of the Aotearoa/NZ transport system.
2. Include **reducing greenhouse gas emissions** as a key objective of the Aotearoa/NZ transport system.
3. Revise the draft GPS 2024 to include policy to create an efficient, inclusive, healthy and sustainable transport system that will help New Zealand prosper.
4. Revise the draft GPS 2024 to take into account the extensive body of international and local research evidence about how to create an efficient, inclusive, healthy and sustainable transport system that will help New Zealand prosper.
5. Recognise the real economic and social costs and benefits of transport policies by requiring that any assessment of "value for money" of transport projects include assessment of the full costs and benefits, including the expected health and environmental impacts both in the short and longer term.
6. Reinstate the transport system priority of inclusive access to ensure that all New Zealanders can benefit fairly from the transport system they fund.
7. Include a wider range of health impacts and include policies that reduce the impact of transport on these outcomes (e.g. physical activity, air pollution, noise pollution, and inclusive access).

8. Remove the requirement that walking and cycling infrastructure is solely funded from the walking and cycling activity class.
9. Increase walking and cycling and public transport funding to enable projects that support New Zealanders' stated transport preferences as well as health and wellbeing for the short and long term.
10. Require consistent consultation and engagement processes across activity classes to ensure that all activities are considered in an equally democratic manner.
11. Prioritise policies that will achieve our legally committed emissions reductions targets while improving the health of New Zealanders.

## References

1. Glazener A, Sanchez K, Ramani T, et al. Fourteen pathways between urban transportation and health: A conceptual model and literature review. *J Transp Health* 2021; **21**: 101070.
2. Shaw C, Tiatia-Seath J. Travel inequities experienced by Pacific peoples in Aotearoa/New Zealand. *Journal of Transport Geography* 2022; **99**: 103305.
3. Mihaere S, Smith M, Jones R. The importance of culturally safe active school travel options to enable tamariki Māori to flourish. A narrative review and model. *MAI Journal* in press; **13**.
4. Hosking J, Ameratunga S, Exeter D, Stewart J, Bell A. Ethnic, socioeconomic and geographical inequalities in road traffic injury rates in the Auckland region. *Aust N Z J Public Health* 2013; **37**(2): 162-7.
5. Raerino K, Macmillan AK, Jones Ngati Kahungunu RG. Indigenous Maori perspectives on urban transport patterns linked to health and wellbeing. *Health Place* 2013; **23**: 54-62.
6. Shaw C, Russell M, Keall M, et al. Beyond the bicycle: Seeing the context of the gender gap in cycling. *J Transp Health* 2020; **18**: 100871.
7. Gage R, Mizdrak A, Richards J, et al. The Epidemiology of Domain-Specific Physical Activity in New Zealand Adults: A Nationally Representative Cross-Sectional Survey. *Journal of Physical Activity and Health* 2023: 1-12.
8. Ministry of Transport. Transport Indicators 2022. <https://www.transport.govt.nz/statistics-and-insights/transport-indicators> (accessed 16 June 2022).
9. Centre for Public Health Research. Environmental Health Indicators New Zealand: Road traffic injury mortality in New Zealand. 2022. <https://www.ehinz.ac.nz/indicators/transport/road-traffic-injury-deaths-and-hospitalisations/>.
10. Ministry of Health. Annual Data Explorer 2018/19: New Zealand Health Survey [Data File]. 2019. <https://minhealthnz.shinyapps.io/nz-health-survey-2018-19-annual-data-explorer/> (accessed 17 June 2020).
11. Statistics New Zealand. Motor vehicles, and phones, fax, and Internet. 2013. [http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/ethnic-profiles.aspx?request\\_value=24705&tabname=Motorvehicles,andphones,fax,andInternet#gsc.tab=0](http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/ethnic-profiles.aspx?request_value=24705&tabname=Motorvehicles,andphones,fax,andInternet#gsc.tab=0) (accessed 12 October 2020).
12. Bull FC, Al-Ansari SS, Biddle S, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *Br J Sports Med* 2020; **54**(24): 1451-62.
13. Physical Activity Guidelines Advisory Committee. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington, DC: U.S. Department of Health and

Human Services, 2018.

14. Wilson OWA, Ikeda E, Hinckson E, et al. Results from Aotearoa New Zealand's 2022 Report Card on Physical Activity for Children and Youth: A call to address inequities in health-promoting activities. *J Exerc Sci Fit* 2023; **21**(1): 58-66.
15. Ministry of Health. Annual Data Explorer 2021/22: New Zealand Health Survey [Data File]. 2023. [https://minhealthnz.shinyapps.io/nz-health-survey-2021-22-annual-data-explorer/\\_w\\_3543bd29/#!/explore-indicators](https://minhealthnz.shinyapps.io/nz-health-survey-2021-22-annual-data-explorer/_w_3543bd29/#!/explore-indicators) (accessed 23 March 2023).
16. Institute for Health Metrics and Evaluation. Global Burden of Disease Study: GBD Compare VizHub. University of Washington; 2024.
17. Shaw C, Keall M, Guiney H. What modes of transport are associated with higher levels of physical activity? Cross-sectional study of New Zealand adults. *J Transp Health* 2017; **7**: 125-33.
18. Martin A, Boyle J, Corlett F, Kelly P, Reilly JJ. Contribution of Walking to School to Individual and Population Moderate-Vigorous Intensity Physical Activity: Systematic Review and Meta-Analysis. *Pediatr Exerc Sci* 2016; **28**(3): 353-63.
19. Sport New Zealand. Active NZ 2019 Participation Report. Wellington: Sport New Zealand, 2020.
20. Wanjau MN, Dalugoda Y, Oberai M, et al. Does active transport displace other physical activity? A systematic review of the evidence. *J Transp Health* 2023; **31**: 101631. 11
21. Bassett D, Hosking J, Ameratunga S, Woodward A. Variations in the health benefit valuations of active transport modes by age and ethnicity: A case study from New Zealand. *J Transp Health* 2020; **19**: 100953.
22. Lindsay G, Macmillan A, Woodward A. Moving urban trips from cars to bicycles: impact on health and emissions. *Aust N Z J Public Health* 2011; **35**(1): 54-60.
23. Ministry of Transport. Domestic Transport Costs and Charges (DTCC) Study – Main Report, Prepared by Ian Wallis Associates Ltd. Wellington Te Manatū Waka Ministry of Transport 2023.
24. Mytton OT, Panter J, Ogilvie D. Longitudinal associations of active commuting with wellbeing and sickness absence. *Preventive Medicine* 2016; **84**: 19-26.
25. Hendriksen IJM, Simons M, Garre FG, Hildebrandt VH. The association between commuter cycling and sickness absence. *Preventive Medicine* 2010; **51**(2): 132-5.
26. Randal E, Shaw C, McLeod M, Keall M, Woodward A, Mizdrak A. The Impact of Transport on Population Health and Health Equity for Maori in Aotearoa New Zealand: A Prospective Burden of Disease Study. *Int J Environ Res Public Health* 2022; **19**(4): 2032.
27. Kuschel G, Metcalfe J, Sridhar S, et al. Health and air pollution in New Zealand 2016 (HAPINZ 3.0): Volume 1 –Finding and implications. Wellington: Ministry for the Environment, Ministry of Health, Te Manatū Waka Ministry of Transport and Waka Kotahi NZ Transport Agency, 2022.
28. Ministry of Transport. Social cost of road crashes and injuries. 2024. <https://www.transport.govt.nz/area-of-interest/safety/social-cost-of-road-crashes-and-injuries/> (accessed 9 April 2024)
29. Hales S, Atkinson J, Metcalfe J, Kuschel G, Woodward A. Long term exposure to air pollution, mortality and morbidity in New Zealand: Cohort study. *Science of The Total Environment* 2021; **801**: 149660.
30. Briggs D, Mason K, Borman B. Rapid Assessment of Environmental Health Impacts for Policy Support: The Example of Road Transport in New Zealand. *Int J Environ Res Public Health* 2015; **13**(1): ijerph13010061.
31. Romanello M, Napoli Cd, Green C, et al. The 2023 report of the Lancet Countdown on health and climate change: the imperative for a health-centred response in a world

facing irreversible harms. *The Lancet* 2023.



Public Health Expert Briefing (ISSN 2816-1203)

---

**Source URL:**

<https://www.phcc.org.nz/briefing/governments-transport-plans-work-against-our-health>