



Transport

New Zealand College of Public Health Medicine Policy Statement

Policy statement

The New Zealand College of Public Health Medicine (NZCPHM) recognises the links between transport and health:

- Active and sustainable modes of transport (such as walking and cycling) positively affect health;
- The current reliance on private vehicle transport has negative impacts on health through road traffic crashes, air and noise pollution, greenhouse gas emissions and increased sedentary time.

The NZCPHM calls for the development of a sustainable transport environment where active travel and public transport are prioritised and represent realistic and safe alternatives to travelling by car.

The NZCPHM supports transport users' hierarchy approaches for strategic planning, prioritisation of funding and implementation of all transport and urban design projects. The NZCPHM also supports the Public Health Association of New Zealand's 2004 position statement on transport and health¹.

Background

Active transport

Active transport is physical activity undertaken as a means of transport. It includes travel by foot, bicycle and other non-motorised vehicles. There are strong links between such 'incidental exercise' and improved health. Even modest daily physical activity improves physical health and mental wellbeing². Active transport can also help improve mental health, community life, social wellbeing and community safety³.

Most journeys of less than 2km can be completed by most people using their legs. However, the current transport infrastructure primarily focuses on private vehicle transport and this has been associated with a decrease in active transport.

Public transport

Although active transport brings greatest overall benefits to health, the use of public transport rather than private transport still brings additional health benefits. Using public transport often incorporates active transport as a part of the journey and therefore encourages physical activity⁴. In addition, at average occupancy, public transport produces less harmful emissions compared with car use and so is the preferred mode of long distance travel⁵.

Public transport can often meet the needs of people where active transport may be less feasible – for example people who are aged, have physical disability, those with young dependents, and those

needing to travel long distances. Improved mobility for women, children, the elderly, and low income groups enhances health equity⁶.

Transport infrastructure and health

Health is adversely impacted when urban spaces and transport infrastructure give priority to private motor vehicles over other modes of transport. This occurs through several mechanisms⁶⁻¹²:

- physical inactivity contributing to cardiovascular disease, diabetes and obesity
- air pollution causing respiratory and other illnesses
- road traffic incidents causing death and injury
- vehicular carbon emissions contributing to global climate change (with health impacts), where road transportation causes one sixth of New Zealand's total gross greenhouse gas emissionsⁱ
- poor urban design with limited recreational space and high geographic isolation resulting in disrupted psychological, social and community health.

The adverse health impacts from transport have been comprehensively researched and alerted to by a number of institutions, including the World Health Organization⁶ and the British Medical Association⁷.

Developing a sustainable transport environment

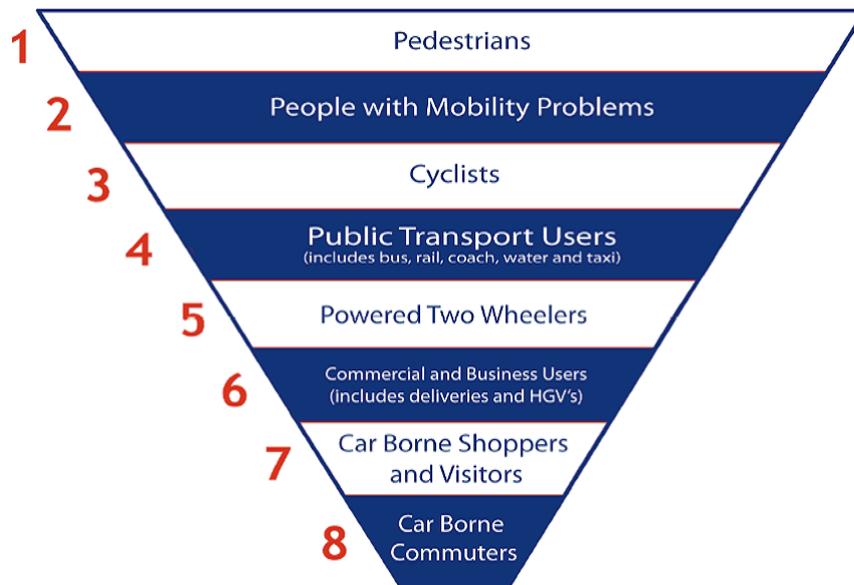
Good urban design facilitates active and public transport by making these options safe, practical and accessible; conversely poor design makes these options unviable. For example, dispersed residential development results in long distances to the workplace, which makes cycling or walking to work impractical¹³. The low population density from such 'urban sprawl' also makes effective public transport options economically non-viable.

Urban planning must establish viable transport options that are accessible and suitable for everyone, and ensure that streets are accessible by all people irrespective of age or ability. Investment in public and active transport is an investment in population health, and reduces road congestion for when people do need to use a private vehicle. This becomes a virtuous cycle so that investment in these low emissions modes benefits all transport modes.

The NZCPHM supports transport user hierarchy approaches for the development and funding of better transport and urban systems. Transport users' hierarchies prioritise active transport first, then public transport, followed by business and freight, and finally the use of private vehicles for personal transport. A typical transport hierarchy is shown in Figure 1¹⁴.

ⁱ This NZCPHM policy on transport concentrates on modes that most directly improve public health – active and public transport modes and road safety. The College acknowledges the roles of other modes of transport, such as rail and coastal shipping (as lower emissions alternatives to road transport), air travel (a large cause of greenhouse gas emissions), vehicular emissions standards and fuel efficiency, and financing.

Figure 1: Transport User's Hierarchy (City of York)



* Note: Pedestrians with mobility problems are given the highest priority

Private transport needs to be shaped by the three Rs of travel demand management – **R**emoving unnecessary trips, **R**educing trip lengths and **R**eplacing car trips. For people to reduce their car use, alternative modes of transport are needed that are convenient, reliable and attractive. Reducing traffic volumes and vehicle speed in local shopping and residential streets is needed to attract more walking and cycling¹⁵. That most families are comfortable with having their children cycle or walk to school could be an indicator of safe and attractive active transport provision.

Links with other NZCPHM policies

Climate change

Sustainability (forthcoming)

Health equity

References and further information

1. Public Health Association. Transport and health. Public Health Association of New Zealand position statement 2004. (<http://www.pha.org.nz/policies/phapolicytransport.pdf>)
2. Physical activity and Health: a report of the Surgeon General. Executive Summary. Atlanta, GA. US Department of Health & Human Services, Centers for Disease Control & Prevention, National Center for Chronic Disease Prevention and Health. (<http://www.cdc.gov/nccdphp/sgr/pdf/execsumm.pdf>)
3. City of Port Phillip Sustainable Transport Strategy. Melbourne: City of Port Phillip. (http://www.envirohub.com.au/uploads/policies-and-strategies/SustainableTransportStrategy_v30.pdf)

4. MacDonald JM, Stokes RJ, Cohen DA, Kofner A, Ridgeway GK. The effect of light rail transit on body mass index and physical activity. *Am J Prev Med.* 2010;39:105-12. (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2919301/>)
5. Hoek G, Boogaard H, Knol A. et al. Concentration response functions for ultrafine particles and all-cause mortality and hospital admissions: results of a European expert panel elicitation. *Environ. Sci. Technol.* 2010; 44:476-82. (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2731037/>)
6. Hosking J, Mudu P, Dora C. Health co-benefits of climate change mitigation – Transport sector. Geneva: World Health Organization, 2011. (http://www.who.int/hia/green_economy/transport_sector_health_co-benefits_climate_change_mitigation/en/index.html)
7. British Medical Association. Healthy transport = Healthy lives. London: British Medical Association, 2012. (<http://bma.org.uk/transport>)
8. Kuschel G, Metcalfe J, Wilton E, Guria J, Hales S, Rolfe K, Woodward A. Updated Health and Air Pollution in New Zealand Study. Emission Impossible Ltd, Environet Ltd, Jagadish Guria, University of Otago, Kevin Rolfe, University of Auckland, prepared for Health Research Council of New Zealand, Ministry of Transport, Ministry for the Environment and New Zealand Transport Agency, 2012. (<http://www.hapinz.org.nz/>). Estimates include 255 premature deaths in adults each year in New Zealand from exposure to particulate emissions from motor vehicles, with 352,000 restricted activity days.
9. Woodcock J, Edwards P, Tonne C, Armstrong BG, Ashiru O, Banister D, et al. Public health benefits of strategies to reduce greenhouse-gas emissions: urban land transport. *Lancet* 2009;374:1930-43. ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(09\)61714-1/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)61714-1/fulltext))
10. 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. (<http://onlinelibrary.wiley.com/doi/10.1111/j.1753-6405.2010.00621.x/pdf>)
11. Global Burden of Disease country profiles: GBD New Zealand. Institute for Health Metrics and Evaluation (IHME), University of Washington, 2013 (<http://www.healthmetricsandevaluation.org/sites/default/files/country-profiles/GBD%20Country%20Report%20-%20New%20Zealand.pdf>); Martin Tobias (personal communication). In New Zealand, 4.2% of the 955,000 total disability-adjusted years of life (DALYs) lost during 2010 were linked with physical inactivity, being approximately 40,110 DALYs
12. New Zealand's Greenhouse Gas Inventory 1990-2011. Ministry for the Environment, Wellington, 2013. (<http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-2013/index.html> , <http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-2013/greenhouse-gas-inventory-2013.pdf>). Calculated as 12569.8 Mt Co₂-equivalents from road transportation ÷ 72834.9 Mt CO₂-e total gross emissions for New Zealand in 2011 (17.3%)

13. Christchurch City Health Profile: Active Transport. Community and Public Health, 2013.
(<http://www.healthychristchurch.org.nz/media/34861/activetransport.pdf>)
14. City of York Local Transport Plan 2011-2031 (LTP3). York: City of York
(<http://www.york.gov.uk/info/200230/ltp3/319/ltp3>)
15. Frank L, Kavage S, Litman T. Promoting public health through Smart Growth: building healthier communities through transportation and land use policies and practices. Vancouver, BC: Smart Growth British Columbia, 2006.
(http://www.smartgrowth.bc.ca/Portals/0/Downloads/SGBC_Health_Report_FINAL.pdf)

Adopted by Council: August 2013

Year for Review: 2018