|  |
| --- |
| **Title of Research Presentation**Modelling the potential impact of active transport on health healthcare costs, and greenhouse gas emissions in New Zealand |
| **Maximum 2500 characters (including spaces but excluding title)****Background/Objectives**Physical inactivity contributes substantively to disease burden, especially in highly car dependent countries such as New Zealand. We aimed to quantify the future health gain, health-sector cost-savings, and change in greenhouse gas emissions that could be achieved by switching short vehicle trips to walking and cycling in New Zealand.**Methods**We used unit-level survey data to estimate changes in physical activity, distance travelled by mode, and air pollution for: (a) switching car trips under 1km to walking and (b) switching car trips under 5km to a mix of walking and cycling. For both interventions, we modelled uptake levels of 25%, 50%, and 100%, and assumed changes in transport behaviour were permanent. We then used multistate lifetable modelling to quantify health impacts as quality adjusted life years (QALYs) gained over the rest of the life course of the NZ population alive in 2011 (n = 4.4 million).**Results**The modelled scenarios resulted in health gains between 1.38 (UI 1.16 to 1.61) and 21.95 (UI 17.58 to 26.47) QALYs/1000 people over the remaining lifespan. Healthcare cost savings ranged between NZ$103million (UI $82m to $127m) and NZ$1.7billion (UI $1.3b to $2.1b). Greenhouse gas emissions were reduced by up to 194.4kgCO2e/year, though changes in emissions were insignificant under some scenarios.**Discussion**Substantial health gains and healthcare cost savings could be achieved by switching short car trips to walking and cycling. Implementing infrastructural improvements and interventions to encourage walking and cycling is likely to be a cost-effective way to improve population health, and may also reduce greenhouse gas emissions.**Keywords**Modelling, physical activity, active transport, health gains, healthcare costs, walking, cycling |