

Hirsch, L., Hosking, J., van der Werf, B., Hawley, G., Wilson, N., Cornille, Z., Mackie, H. (2019) Te Ara Mua – Future Streets: Road User Behaviour Outcomes. 5th International Conference on Transport and Health, Melbourne, Australia, 4-8 November.

Background: Te Ara Mua – Future Streets is a controlled before-after study of a neighbourhood street retrofit in the suburb of Māngere, Auckland, New Zealand. The project aimed to make it safer and easier to get around the neighbourhood, especially by walking and cycling. To assess the extent to which this aim was achieved, we evaluated changes in observed road user behaviours, including road user interactions, volumes of travel by different modes, and traffic speed. It is expected that changes in these behaviours are an important step before eventual outcomes for modal shift, injury reduction, and health improvement.

Methods: We collected pre- and post-intervention video recordings and vehicle counts and speed using pneumatic road tubes. Data were collected in selected streets in both intervention and control areas. For data analysis, we developed a video coding framework to understand road user behaviours and interactions, and to count people walking and cycling. Vehicle speed and counts were generated automatically.

Results: After the intervention, observed walking and cycling behaviour indicated easier and safer road use for those modes. Interactions between people walking and motor vehicles shifted to lower-energy, safer locations. Improvements to walking infrastructure facilitated group walking behaviour and improved accessibility for wheel-based footpath users. At some sites, people cycling shifted to the new cycle facility, reducing interactions with motor vehicles. Vehicle speeds and counts reduced substantially on treated streets. Walking and cycling counts are currently being analysed.

Conclusions: The Te Ara Mua – Future Streets intervention appears to have facilitated walking and cycling through safer road user interactions for those modes. Reductions in motor vehicle speed and traffic volume also contribute to the safety of walking and cycling in this neighbourhood. Longer-term follow-up will assess whether these changes translate into sustained increases in walking and cycling.