

**To:** Transport & Health Policy Makers, & Practitioners  
**From:** Prof Adrian Davis, TRI, Edinburgh Napier University  
**Date:** 7<sup>th</sup> January 2020  
**Subject:** Essential Evidence 4 Scotland No 21 The importance of car parking policies for active travel

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Top line: Relaxation of car parking policies is associated with motor vehicle only trips that are more than 10% higher than at workplaces where more restrictive parking policies are in force. Transitions to more restrictive policies indicate shifts in travel behaviour in favour of active travel modes and public transport.

The use of motor vehicles places a considerable burden on public health, increasing cardio-metabolic risk and contributing to air pollution and road traffic injuries. These hazards are compounded by the growth of mass motorisation, planning policies that prioritise motor vehicles and a lack of infrastructure for walking and cycling. Evidence suggests that replacing private motor vehicle trips with more active modes of transport is likely to have a positive effect on physical activity and obesity rates and the risk of numerous non-communicable diseases. These benefits may outweigh risks from injury or exposure to air pollution. Accordingly, the shift of travel away from private motor vehicles has become an important goal of public policy.<sup>1</sup>

In public health, policy changes have been implemented successfully as an effective means of moderating negative health behaviours such as smoking and alcohol consumption. In the context of active travel, these could include negative incentives that penalise car use or positive incentives that reward active travel. It is plausible that similar policies in workplace settings may also encourage shifts away from motor vehicles and towards alternative modes of travel. This view is supported by a study of 20 exemplar cases in the UK, which suggests that parking management (such as the introduction of permits, charges or compensation for not using a private vehicle) was the single most important factor in achieving behaviour change.<sup>2</sup>

One of the first studies to use cohort data to assess the role that changes in workplace parking policies may play in changing commuting patterns was undertaken in Cambridgeshire (UK).<sup>3</sup> It was found that relaxations of parking policies were associated with higher proportions of commute trips made exclusively by motor vehicle and, in line with a causal interpretation and substitution, the researchers found corresponding lower proportions of trips involving walking, cycling or public transport. Reverse associations were evident following the introduction of more restrictive workplace parking policies. At the population level, even these small effects may still have a sizeable impact on the number of commutes undertaken by motor vehicle, particularly in urban areas. Findings are in line with those from cross-sectional studies<sup>4</sup>, which indicate that commuters with access to free or paid for car parking at work are less likely to walk or cycle as part of the journey to work.<sup>5</sup>

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<sup>1</sup> Knott, C., Sharp, S., Mytton, O., et al, 2019. Changes in workplace car parking and commute mode: a natural experimental study, *Journal of Epidemiology and Community Health*, 73:42–49.

<sup>2</sup> Cairns, S., Newson, C., Davis, A. 2010. Understanding successful workplace travel initiatives in the UK. *Transportation Research Part A: Policy and Practice*, 44: 473–94.

<sup>3</sup> Knott, C., Sharp, S., Mytton, O., et al, 2019.

<sup>4</sup> A cross-sectional study is a type of observational study that analyses data from a population, or a representative subset, at a specific point in time—that is, cross-sectional data.

<sup>5</sup> Dalton, A., Jones, A., Panter, J., et al. 2013. Neighbourhood, Route and Workplace-Related Environmental Characteristics Predict Adults' Mode of Travel to Work. *PLoS One*, 8:e67575