

**To:** Transport & Health Policy Makers, & Practitioners  
**From:** Professor Adrian Davis  
**Date:** 16th June 2022  
**Subject:** Essential Evidence 4 Scotland No.54: Health and economic impact of walking and cycling in Scotland

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Top Line: Despite the relatively low levels of active commuting in Scotland, in 2011 it was estimated that close to 200 deaths a year could be prevented through current levels of active commuting.

Despite a substantial evidence base for the health and economic benefits of walking and cycling,<sup>1</sup> there remains a lack of published findings on the levels and benefits of active commuting at a national level. A study quantified the proportion of active commuters who met a daily equivalent of weekly physical activity recommendations through their commuting journeys, and the economic value of health benefits associated with active commuting in Scotland.

A repeat cross-sectional analysis of the 2001 and 2011 waves of the Scottish Census was conducted.<sup>2</sup> The researchers analysed data from approximately 250,000 respondents aged 16–74 at each time-point who selected walking or cycling for their usual journey to work. A count was taken of walkers and cyclists whose daily commuting time was at least 30 min. The WHO Europe Health Economic Assessment Tool<sup>3</sup> was used to estimate the number of deaths averted by active commuting, and the associated economic value of walking and cycling annually and over a 10-year period.<sup>4</sup>

Active modes of commuting accounted for a modal share of 13.5% ( $n = 244,009$ ) in 2001, and 14.5% ( $n = 286,145$ ) in 2011. In 2001, 46.5% of all active commuters met a daily target of 30 min of moderate intensity activity rising to 50.2% in 2011. Using the then most up-to-date estimates for Value of Statistical Life, in Scotland the annual health economic benefit of commuting to work by walking was estimated to be approximately EUR 700.2 million, and EUR 79.8 million for cycling to work. The majority of this EUR 780 million is attributable to walking to work due to the higher prevalence of this mode of commuting in comparison to cycling. It is worth noting that the health economic value calculations are based on deaths prevented, and do not factor in reduced illness as a result of walking and cycling. Thus, these values are likely to be a substantial underestimation of the true health benefits of active commuting in Scotland.

Overall this work shows the important health and economic benefits associated with active commuting at a local and national level. There has been little observed change in active commuting between the 2001 and 2011 waves of the national census, however it is clear that walking and cycle commuting have a substantial economic value to Scotland. The authors note that the findings form a vital part of advocacy for more walking and cycling promotion, in engaging the wider public, and in justifying further investment in more walkable and cycle friendly environments in Scotland given the multiple co-benefits of moving away from car use to more active modes of travel. The outcomes of this research provide a baseline set of active travel and health metrics which can be used for monitoring and comparison over time.

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<sup>1</sup> Department for Transport, 2014. Claiming the Health Dividend. [DfT publications template - colour \(Word 2013\) \(publishing.service.gov.uk\)](#) A report by Davis, A. (Declared interest)

<sup>2</sup> Baker, G. et al, 2021, Open Access [Quantifying the health and economic benefits of active commuting in scotland - ScienceDirect \(uwe.ac.uk\)](#)

<sup>3</sup> WHO Europe [www.heatwalkingcycling.org](http://www.heatwalkingcycling.org) accessed 16/06/2022

<sup>4</sup> It is of note that schemes increasing extra road capacity for motor vehicles use a 30 or 60 year time period – the longer the time period the greater the calculated benefit will be.