

To: Transport & Health Policy Makers, & Practitioners
From: Professor Adrian Davis
Date: 4th November 2021
Subject: Essential Evidence 4 Scotland No.45 Free bus travel for young people in Scotland

Top Line: There is a reasonable expectation that free bus travel for 5-21 year olds will have a significant health impact, through changes to travel behaviours, but uncertainty about the size or nature of effects.

Free bus travel can influence decisions about the number and type of journeys made and the mode used. This can impact on activity levels through changed travel patterns and access, including to work and leisure opportunities. Free bus travel for older people has been shown to deliver health benefits. Those with a bus pass are more physically active. Among women in particular, the bus pass is associated with healthier aging, a faster gait speed, lower BMI and smaller waist circumferences.¹ Previous research on free bus travel for young people (12-17) in London² found it was associated with a higher use of bus, a reduction in the number of walking trips (but not the distance walked) and some evidence of a reduction in cycling.

On mainland Europe, some locations have offered free bus transport in the urban area with no age restrictions. In Hasselt, Belgium, this resulted in a 10-fold increase in bus use, albeit from a very low base. New bus users had switched from car, bicycle and walking.³ In Templin, Germany, it was found that most new bus users had switched from active travel modes with a minimal switch from the car.⁴ Tallinn, Estonia, (pop. 420,000), is the largest city in Europe with free bus travel. Pre-intervention it had a well-developed bus network and high mode shares for both public transport and walking. Post-intervention analysis showed that public transport mode share increased to 63% (from 55%) and car share decreased to 28% (from 31%). However, most of the switch was from walking and this was most pronounced amongst 15–19-year-olds where walking mode share decreased to 13% (from 23%).⁵ Some free travel schemes have been offered specifically to students. In Brussels, this both generated new trips and prompted mode switch. Of those students with access to a car 66% sometimes choose public transport over car use, because it was cheaper, 21% sometimes took public transport for a stop or two, where they used to walk and 5% of students switched from cycling.⁶ In the Netherlands, free public transport was made available to students across the whole country in 1991. Following this, public transport mode share amongst students increased from 11% to 21%, car use decreased by 43% and bicycle use decreased by 52%.⁶

There is UK-based evidence on health indicators associated with free bus travel but none that apply to the young adult demographic (i.e. 17-21) where lifestyles and decision-making around transport choices may be very different not least because access to car driving is an option for some. 90% of respondents to a Scottish Government consultation felt that extending free bus travel would contribute towards reducing inequalities for children and young people.⁷ The Scottish Government legislated in August 2021 for a scheme to allow those aged 5–21 and resident in Scotland access to free bus travel from 31st January 2022.

¹ Webb, E., et al. 2016 Free Bus Travel and Physical Activity, Gait Speed, and Adiposity in the English Longitudinal Study of Ageing, *American Journal of Public Health*, 106: 136-142.

² Green, J., et al. 2014, On the buses: a mixed-method evaluation of the impact of free bus travel for young people on the public health, *Public Health Research*, 2.1.

³ van Goeverden, C., et al, 2006, Subsidies in public transport. *European Transport*, 3: 5- 25.

⁴ Storchmann, K. 2003 Externalities by automobiles and Fare-Free Transit in Germany - A Paradigm Shift? *Journal of Public Transportation*, 6: 89-105.

⁵ Cats, O., Susilo, Y., Reimal, T. 2017 The prospects of fare-free public transport: evidence from Tallinn. *Transportation*, 44: 1083-1104.

⁶ De Witte, A., et al, 2006, The impact of "free" public transport: The case of Brussels. *Transportation Research Part A: Policy and Practice*, 40: 671-689.

⁷ Transport Scotland. Young Persons' Free Bus Travel Scheme. 2021. Transport Scotland.

<https://www.transport.gov.scot/concessionary-travel/young-persons-free-bus-travel-scheme/>