Communities Overview & Scrutiny Committee

Workplace travel planning intervention

17 February 2021

Recommendation(s)

1. All council staff are encouraged to plan alternative walking, cycling and public transport options for their commute to work before returning to work in central office locations following the COVID-19 pandemic. This can be done via WCC's Active Travel resource (https://www.warwickshire.gov.uk/activetravel), which needs to be reviewed regularly. It should also be considered how key elements identified in this study, such as role of air pollution monitors in educating employees about the impacts of air pollution and role of travel planning sessions in changing travel behaviour, can be integrated into future workplace travel interventions.

2. Steps should be taken to continue to address the barriers identified in this study that participants reported as reasons for being unable / unwilling to cycle or walk to work. These include safety concerns and lack of cycle infrastructure, financial incentives (such as discounts at local cycle stores) and improved workplace facilities such as showers, changing facilities and a drying room.

1. Executive Summary

1.1 The primary aim of this project was to determine whether people who commute to work via car change their primary mode of transport to walking or cycling following the delivery of a multifaceted workplace travel planning intervention called the 'Choose how you move' toolkit.

1.2 The secondary aim of this project was to identify factors that could encourage council employees to walk, cycle or take public transport to their place of work.

1.3 The Choose how you move toolkit consisted of the following three components: (1) completion of a baseline travel behaviour questionnaire; (2) deployment of personalised air pollution monitors and (3) attending a personalised travel planning session.

1.4 Following delivery of the intervention, there was an overall reduction in the number of participants using a car as their primary mode of transport to commute to work (from n=14 to n=9). There was also an increase in the number of participants only every walking or cycling, from zero at the start of the study to three participants at the end of the study. Due to the small sample size, it is not possible to determine whether this represents a statically

significant shift in behaviour, however it represents a potential change in behaviour at the population level.

1.5 Participants reported a number of factors that would encourage walking and cycling to work in the future, including improved workplace facilities (e.g., cycle storage) greater flexibility in working hours, safer cycle and walking routes, a park and ride system and financial incentives such as discounts at local cycle shops.

1.6 A modified version of this intervention could be effective in promoting active travel among a wider number of council staff. Active travel is defined as walking or cycling to work. There is also the possibility to use this toolkit to promote active travel in other locations such as local schools and businesses.

2. Introduction

2.1 Air pollution is a leading environmental threat to human health in the UK.[i] The primary source of air pollution in urban areas is traffic emissions.[ii] In total, 63% of people commute to work by car in the UK, despite a majority of these journeys being under five miles.[iii] A modal shift to more active forms of commuting (walking and cycling) provides an opportunity to reduce individual level contribution and exposure to air pollution while increasing levels of physical activity, therefore providing multiple public health benefits.[iv]

2.2 This aim of this workplace travel planning intervention (called the choose how you move toolkit) was to promote a modal shift to more active forms of transport among people driving up to five miles to their place of work in Warwickshire. Specifically, individuals working for Warwickshire County Council (WCC) and Nuneaton & Bedworth District Council (NBDC).

3. Travel Planning Intervention

3.1 Thirty WCC and NBDC employees commuting to work by car were recruited to participate in the study in May 2019. The choose how you move toolkit, delivered to each of the participants, consisted of the following three components:

1. *Completion of a Baseline Questionnaire*: All participants completed an online questionnaire immediately following recruitment in May 2019, designed to capture data on current travel behaviour, barriers to active travel and concerns about the impacts of air pollution on their health.

2. *Deployment of Air Pollution Monitors*: All participants were provided with FLOW© personal air pollution monitors to use on their commute to and from work over the same two-week period (17th – 28th June 2019). The FLOW© monitors provided participants with real-time Global Positioning System data and air pollution data on their personal mobile phone via an associated phone app.

3. *Travel Planning Session*: Each participant was invited to a face to face one-hour travel planning session, which took place two weeks after deployment of the air pollution monitors (August 2019). Data on the participants' current travel behaviour and air pollution exposure was used to inform the development of the personal travel plans.

3.2 Following delivery of the travel plans, participants were advised that there would be a follow-up questionnaire and redeployment of air pollution monitors after four months. The expectation being that delivery of the intervention may result in changes in commuting behaviour over this time.

3.3 After four months, participants completed a follow-up online questionnaire to determine any self-reported changes in travel behaviour. Participants also used the FLOW© personal air pollution for a two-week follow-up period (11th – 22nd November 2019) to examine how levels of air pollution exposure had changed following delivery of the travel planning session.

3.4 Participants were also asked to report barriers they experience in walking and cycling to work, as well as factors that would encourage them to change their travel behaviour in the future.

4. Findings

4.1 In total, 11 of the participants withdrew from the study, meaning 19 individuals completed the entire study.

4.2 Following delivery of the intervention, there was an overall reduction in the number of participants using a car as their primary mode of transport to commute to work (from n=14 to n=9). There was an increase in the number of participants occasionally walking or cycling (from n= 5 to n = 7). There was also an increase in the number of participants only every walking or cycling, from zero at the start of the study to three participants at the end of the study (see figure 1). Due to the small sample size, it is not possible to determine whether this represents a statically significant shift in behaviour, however it represents a potential change in behaviour at the population level.

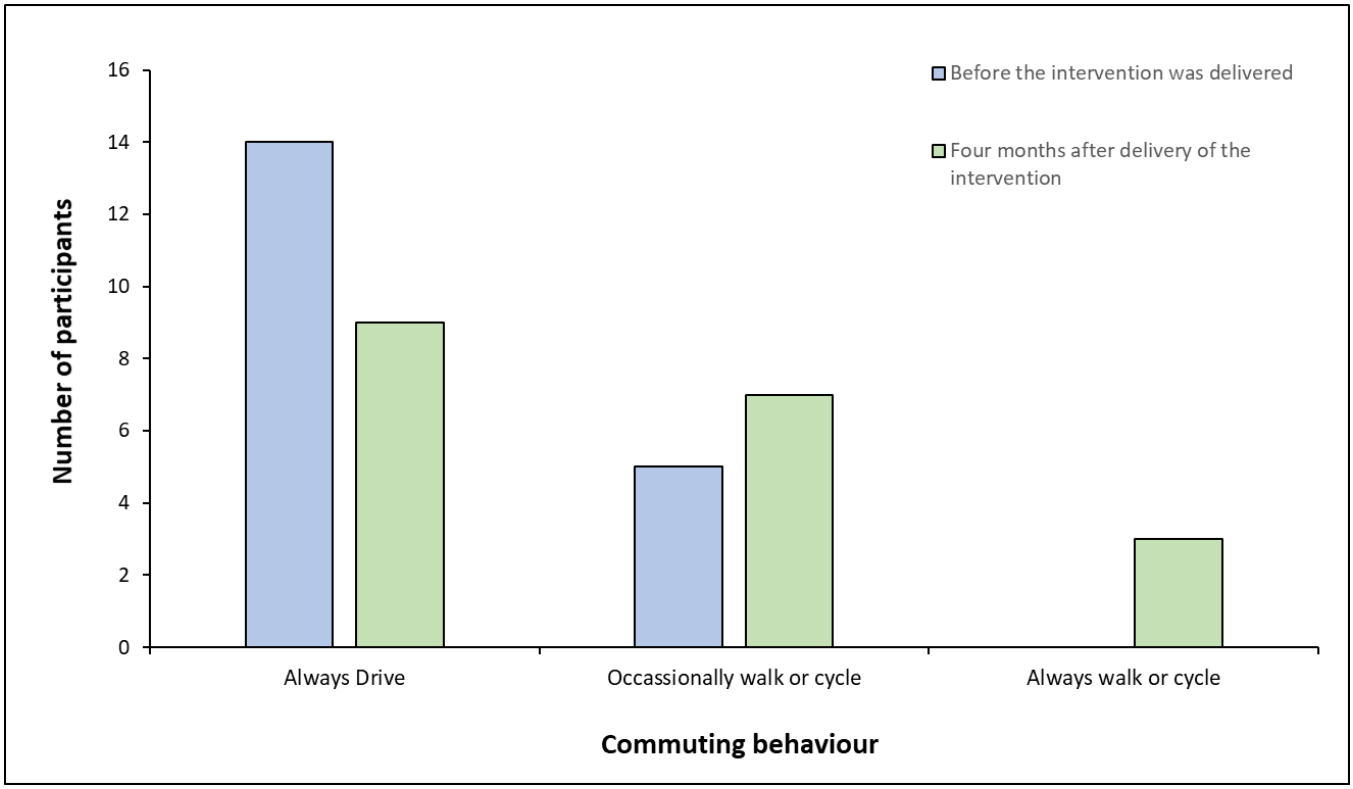

Figure 1: Primary travel behaviour immediately before and four months after delivery of the Choose How you Move Toolkit

4.3 The three participants exposed to the highest level of PM2.5 at the time of recruitment all displayed significant reductions in air pollution exposure at four-month follow-up. This suggests that individuals exposed to the highest levels of pollution changed their travel behaviour in some way. This could have been due to a change in route choice or travel behaviour (e.g., a modal shift from driving to cycling / walking), however exact reasons for the decline in exposure cannot be ascertained.

4.4 Participants provided detailed feedback on barriers they face in using active forms of transport. Barriers included:

- Childcare responsibilities and working fixed hours, with participants reporting: '*I wish I could change my behaviour but I am restricted to a tight schedule due to childcare commitments*.'
- Transporting bulky items, such as laptops, with one participant reporting '*I have too much to carry*.'
- Safety concerns about walking and cycling to work, with numerous participants feeling unsafe when cycling and one participant reporting that '*it's too dangerous to cycle*'
- A lack of workplace cycling facilities

4.5 In describing factors that would encourage active travel in the future participants reported:

- A park and ride system as '*to walk the full distance to work would take too long but if there was somewhere to park a mile or so outside of Warwick …. it would make walking at least part of the journey possible*'.

- Being able to leave laptops and chargers at work and more flexible working hours.

- Improved cycle safety, particularly '*safer cycle routes* and '*safer cycling within Warwick town centre*'. Similarly, to encourage walking to work it was suggested that there could be '*improvements to the quality of footpaths [and] suitable crossing points*.'

- Financial incentives to walking and cycling were also suggested, such as '*council employees getting discounts at local cycling shops*.'

- Improved work place facilities such as more showers, changing facilities, a drying room (for use in the winter) and safe storage facilities for cycling equipment and clothes.

- Wanting more information on '*how to avoid areas that are highly polluted*' when walking and cycling

4.6 Participants also demonstrated a greater understanding of ambient levels of air pollution and sources of air pollution by the end of the study.

4.7 There are two main limitations associated with this intervention. The delivery of the travel plans was resource intensive, which means that if this intervention is to replicate in the future it requires adequate funding. Secondly, the intervention was associated with around a 30% drop out rate. It is possible that individuals most likely to change their behaviour are most likely to remain in the study. This means future interventions may be most effective if they target individuals that already display a willingness to walk / cycle to work.

5. Conclusion

5.1 The 'Choose how you move toolkit' influenced both travel behaviour and awareness of ambient levels of air pollution. In line with previous research, participants displayed a step-wise change in behaviour.[v,vi,vii] Specifically, all of the participants that reported walking or cycling at four-month follow-up (n = 3) already reported occasionally walking or cycling at the time of recruitment. No participant that only ever commuted to work by car at the time of recruitment changed to only ever using active travel.

5.2 The barriers identified to walking or cycling to work were consistent with previous research and included active travel being more inconvenient than

driving, a lack of flexibility due to childcare responsibilities and concerns about safety when walking and cycling.[viii,ix]

5.3 A modified version of this intervention could be effective in promoting active travel among a wider number of council staff. There is also the possibility to use this toolkit to promote active travel in other locations such as local schools and businesses. However, this must be done alongside measures that address current barriers to active travel, such as improved workplace facilities and improvements to local cycling and walking infrastructure.

6. Financial Implications

None

7. Environmental Implications

7.1 A system-wide change in travel behaviour, resulting in increased rates of active travel, would have profound impacts on the environment and human health through reduced contribution and exposure to air pollution and increased levels of physical activity.

7.2 Air pollution is associated with the onset and exacerbation of morbidities including cardiovascular and respiratory diseases, cancer, pregnancy complications and impeded cognitive development.

7.3 Groups at increased risk of morbidity and mortality due to air pollution include children, the elderly and people with pre-existing health conditions. For these groups there are no safe levels of air pollution exposure.[x]

8. Supporting Information

N/A

9. Timescales associated with the decision and next steps

N/A

10. Appendices

None

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The report was circulated to the following members prior to publication:

Local Member(s): None
Other members: n/a

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