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Active transport during and beyond the COVID-19 pandemic: lessons from international experience

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1. Introduction

As an indispensable part of sustainable transport systems, active transport (AT, primarily walking and cycling) is associated with multiple benefits, including improved air quality, increased physical activity, reduced congestion, reduced greenhouse gas emissions and increased equity of access (Gotschi et al., 2016, Litman, 2022, Brand, 2021). While urban and transport planners have long supported infrastructure for AT, the global pandemic has served as a vital inflection point, enabling cities to pursue established sustainable transport initiatives, including investment in AT. In short, COVID-19 has brought the well-established health mandate already associated with a shift away from private car-based travel to AT modes to the fore (Vardoulakis et al., 2016, Vardoulakis et al., 2018), and provided a potentially valuable opportunity to pursue healthier, more sustainable transport systems.

This paper seeks to understand the impact of the pandemic on the ways AT is planned and provided through policy and in practice. We present findings from a survey of 40 AT professionals in practice working in 20 different cities around the world. The survey asked questions about the impact of COVID-19 on planning and provision of infrastructure for AT, as well as practitioner perceptions of barriers, enablers and catalysts for AT projects. We provide a synthesis of these international experiences, and an analysis of existing barriers and enablers to AT provision now that the direct impacts of the pandemic have subsided. We conclude with policy recommendations and some suggestions for future research.

2. Background: COVID-19 and active transport

The COVID-19 pandemic, as an unplanned major disruption, has provided a unique opportunity to question and shift routine behaviours, including the way we travel (Calderón Peralvo et al., 2022). The literature on this opportunity is prolific, and can be conceptualised as relating to one of three COVID-induced shifts: temporary aversions to public transport; increased working from home and living locally; and rising attention to health.

2.1 Temporary aversions to public transport

The initial impact of the pandemic on day-to-day transport practices was a sharp shift away from public transport modes. Government-mandated lockdowns reduced the operation of public transport (Beck et al., 2023) and even post lockdown periods public transport mode share has rebounded more slowly than other modes (Transurban, 2022, Hensher et al., 2022). This is possibly related to ongoing concerns about hygiene in crowded environments (Eisenmann et al., 2021, Beck et al., 2021), as well as decreased congestion and increased access to car parking at destinations, both related to increases in remote working. Decreased public transport use has

potential to both support and deter the use of active modes. For example, shorter public transport trips might be amenable to substitution with walking and cycling, and there is some evidence that cycling replaced public transport over the course of the pandemic (Schaefer et al., 2021). On the other hand, replacing public transport trips with private car use will result in more cars on the road which is a deterrent to AT, particularly cycling.

2.2 Increased working from home

In many cities, lockdowns mandated remote working arrangements and normalised the practice of working and studying from home (WFH) for certain populations. This is predicted to continue now that restrictions have subsided (Hensher et al., 2023). Indeed, WFH has been recognised as "a positive unintended consequence" (Beck and Hensher, 2022) of the pandemic, bringing a series of benefits to individuals and households. Although the debate about whether WFH will reduce the transport task of cities is ongoing (Hostettler Macias et al., 2022), a reduction in journeys to work has potential to save commute time, bring relief from traffic stress, and even ameliorate the cost of congestion. In addition to shifting day-to-day travel patterns associated with the commute, increased WFH also provides an opportunity for people to live a more 'local life', where they are less dependent on travel outside of their general neighbourhood. At its most extreme this may mean residential relocations to more remote areas (Gorman-Murray and Bissell, 2018, Habib and Anik, 2021, Bachimon et al., 2020). Remote working presents opportunities and threats to the use of AT. Local trips are likely to be shorter and more feasible on foot or by bike. Residential relocation away from the workplace, however, ensures that any time this location is accessed, it is more likely to be by car. Removal of the commute also removes the AT trip that generally precedes a public transport journey.

2.3. A raised attention to health and wellbeing

In many and varied ways, the pandemic raised attention to individual and community health (Budd and Ison, 2020, Musselwhite et al., 2020). During lockdown periods, AT was conducive to maintaining social distancing compared to public transport, and it provided a good opportunity for physical exercise. This attracted community attention, and several studies have found AT increased during the pandemic (Sung and Monschauer, 2020, Conrow et al., 2021, Zafri et al., 2021, Vardoulakis et al., 2020). In many cases this may have fostered an increased appreciation for alternative transport modes for people who had not previously used walking and cycling to travel. In others, however, the experience may not have been positive, particularly in places where adequate infrastructure for safe AT is lacking.

While impacts of COVID-19 on individual travel behaviour have dominated related research to date, the pandemic also provided an opportunity to examine the response of transport planners and policies within the AT sector (Beck and Hensher, 2020). In addition, the shift in focus is also a chance to research and leverage growing political support for AT interventions.

In many major cities around the world, COVID-19 has stimulated the development of AT infrastructure and behaviour change support programs, resulting in either structural or operational changes in service provision. For instance, the 'Slow streets program' in San Francisco and Oakland in the US (SFMTA, 2022a) limited traffic speeds on certain residential streets to 15 mph (24.14 kph) or less (SFMTA, 2022b) to create "roadways where everyone is welcome" and feels comfortable and safe. Although many of these AT initiatives were temporary, they have the potential to generate long-term impacts on institutional approaches to AT support. Despite this potential, there is very little research seeking to examine how the pandemic has been interpreted into ongoing approaches to the planning and provision of AT programs and infrastructure. This paper presents research to fill this gap, providing the results of a small scale, qualitative survey of 40 professionals working in AT from around the world.

3. Survey of transport professionals - results

We designed an online survey to collect international experiences from transport professionals with a focus on policies and practices that have been implemented in cities around the world during and since the COVID-19 pandemic. The survey was online, and advertised to transport professionals using contacts of the authorship team, word-of-mouth, and mailing lists relevant to the transport industry. This was intended to be a small-scale qualitative survey to gain in-depth insights rather than aim for representativeness. The survey was launched on 7 November 2022 and closed on 31 December 2022. Of 40 fully complete responses 65% (n=26) were from Australia or New Zealand, with the remaining 35% (n=14) from North America and Europe. Overall, respondents represented 20 cities.

The majority of respondents worked for universities (n=10) and consultancy firms (n=10), followed by different levels of governments, peak organisations, private operators, and advocacy groups. Nearly half (n=19) of the organisations had been working in this space for 10 years or more. Most organisations were involved in AT programs at the stage of 'strategic planning and policy making'. 'Increasing transport accessibility', 'improving road safety', 'increasing transport equity', and 'addressing climate change', are the most commonly stated goals of these organisations. Respondents worked on an array of project types, and indicated only very subtle shifts in their projects over the course of the pandemic – notably, an increase in behaviour change programs and pop-up (temporary) interventions.

Respondents were asked to nominate and provide details on one particular AT project or strategy since COVID-19 and how it was impacted by COVID-19. Only 6 out of 40 respondents considered the pandemic strongly motivated their project, while 8 respondents stated the pandemic had a negative effect. Figures 1 and 2 show the enablers and barriers of the nominated projects. Projects were enabled by financial, community and political support and disabled by staff shortages, practical constraints and competing priorities. Although not shown here, we also asked whether projects were enabled by the attention of one specific actor – such as a politician, manager or community member. In total 11 projects answered yes to this question. Although the impact of COVID-19 was not very pronounced compared to other (established) factors, it is of interest that almost as many respondents identified the pandemic as an enabler (11) as those who identified it as a barrier (9).

Figure 1: Proportion of respondents who see a particular element as an enabler to project implementation

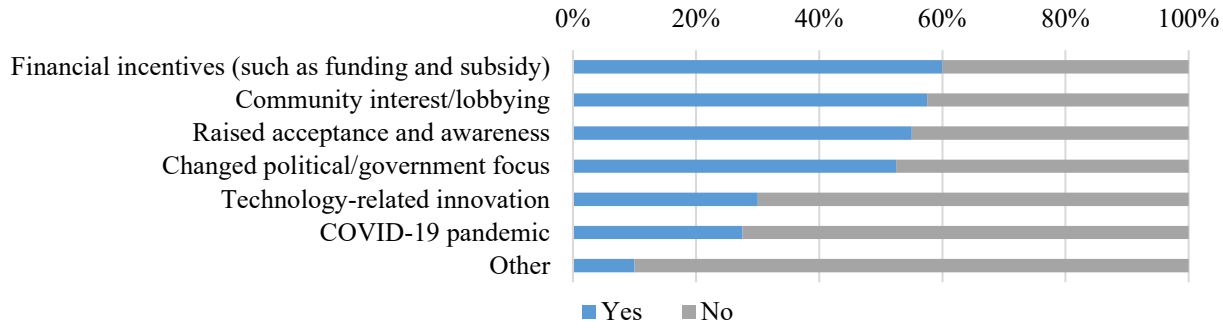
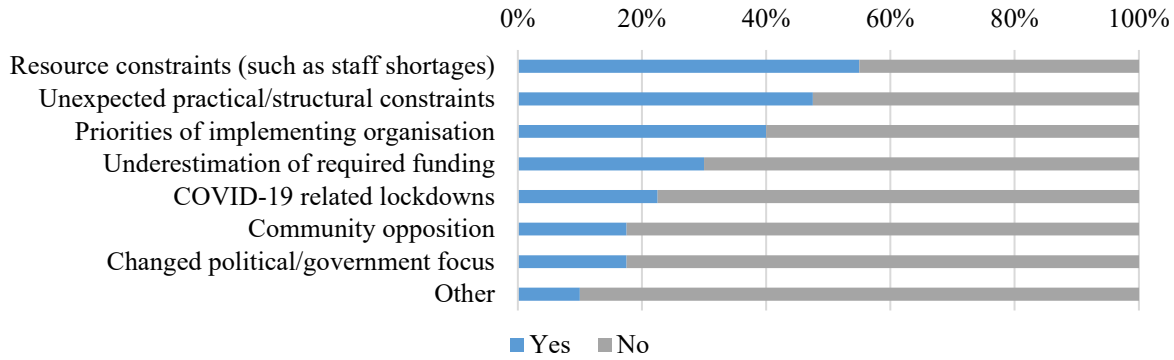
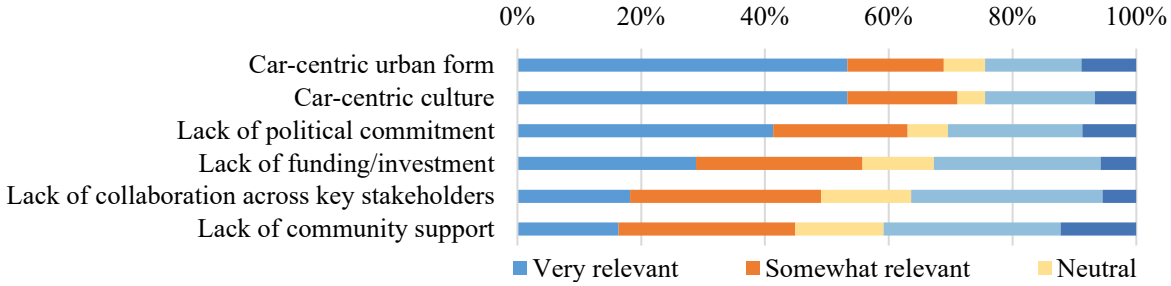


Figure 2: Proportion of respondents who see a particular element as a barrier to project implementation



Respondents were also asked to rate the key barriers by relevance to implementation of AT programs (Figure 3), foremost of which were car-centric urban form and culture.

Figure 3: Perceived key barriers to the implementation of successful active transport programs



4. Discussion and conclusion

Our results concur with the nascent body of literature in this space (for example (Lawlor et al., 2022)) to indicate that COVID-19 did influence on the planning and provision of AT programs, however the shift is been subtle.

The fact our respondents highlighted the importance of aligning their projects with a renewed political or government focus speaks to existing literature on emphasizing the critical role politics can play in providing for AT (Khreis et al., 2017, Buehler et al., 2019). Also, the recognised power of specific actors in carrying forward the project, speaks to the power of influential persons and advocacy groups in promoting AT (Jackson, 2021, Molner et al., 2023).

Further, our results confirm existing literature highlighting the role community support and engagement can play in supporting AT (Cusack, 2021). This adds weight to existing calls to include the community in planning for AT as a way to foster support and advocacy.

Finally, very few of our respondents nominated that the involvement of their organisations in AT was informed by the multiple public health benefits associated with AT. In this sense, there seems to be limited awareness of the multiple benefits AT can provide to physical and mental health, for example, through increased levels of physical activity and improved air quality, in addition to a reduction in COVID-19 transmission risk. This indicates a lost opportunity for professionals to leverage the very emotive and empirically proven health message to promote walking and cycling as transport modes.

Overall, our findings demonstrate that there was indeed a heightened awareness of the importance of AT over the course of the pandemic. This original enthusiasm, however, does not seem to have carried through to ongoing changes to the ways we plan and promote transport, particularly in car-dependent contexts which continue to dominate as a key barrier to alternative modes. We have also confirmed the nuanced and politicised nature of providing programs and infrastructure for AT, highlighting the need for professionals in this space to engage in the

promotion of AT as urgent and lucrative from within the institutions that govern change. Harnessing the health benefits associated with AT will assist this task, providing an avenue through which to augment the urgency with which we pursue sustainable transport transitions.

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