Health and nuisance impacts from outdoor smoking on public transport users: data from Auckland and Wellington

Local governments in New Zealand have been progressing a range of outdoor smokefree areas, including playgrounds, parks, sports fields, sporting stadiums, and other settings such as zoo grounds. There has also been some activity to develop smokefree streets, and central government has mandated smokefree school grounds (see a recent review).

Various reasons favouring outdoor smokefree areas include:

- To help to denormalise smoking, so as to protect children from smoking uptake, to promote quitting and to protect ex-smokers who are at risk of relapse. This is particularly relevant for New Zealand given the Government goal of a ‘Smokefree Nation by 2025’.

- To lower the public’s exposure to secondhand smoke (SHS) which is a proven carcinogen, and a cause of coronary heart disease. A range of New Zealand studies has found that SHS contributes to air pollution in city streets, including in areas around pubs and restaurants. One of these studies found relatively high levels of fine particulates (PM$_{2.5}$) from SHS in Lower Hutt bus stops (up to 153 µg/m$^3$). Other New Zealand work has also reported elevated peak levels of these fine particulates in transportation settings (e.g., 21 µg/m$^3$ in a 2006 study and 62 µg/m$^3$ in a 2010 study).

- To reduce nuisance impacts from the irritant effects of SHS. National “Tobacco Use Survey 2008” data indicate that SHS exposure at a bus stop or train station is still common (at 11.9% of respondents; 95%CI: 10.6–13.2%).

- To reduce a range of fire and environmental cigarette butt litter costs and damage. These include street cleaning costs, the costs of removing or limiting the effects of this litter in storm water and sewage treatment systems, and ecological harm. In Wellington, such cigarette butt littering commonly occurs even when litter bins are ubiquitous.

- To help improve the images of areas or cities, especially where local authorities are interested in ‘healthy’ town or city branding.

Despite such issues, not all train platforms are smokefree and no New Zealand towns or cities currently have smokefree bus stops (to our knowledge in July 2012).

Internationally, smokefree policies for transport waiting areas are becoming common, with policies in three states and over 250 cities in the USA, and policies in South Korea (Seoul), seven Canadian cities, and South Australia. Given this background, we considered other data to inform further discussions around smokefree public transportation settings (and wider smokefree shopping street developments).

Methods—We considered smoking-relevant data from a PhD thesis (by one of us: MR) that studied how people used their time on public transport in New Zealand.
This work included a survey in October 2010 of Auckland and Wellington adult (over 18) bus and train users (n=1039 returned written responses out of 2000 distributed at bus stops and train stations, an overall response rate of 52.0%). There were also semi-structured telephone interviews with 48 adult bus or train passengers in Auckland and Wellington (November 2009 to June 2010). A purposeful selection was made of nearly equal numbers of men and women who were recruited on the street near bus stops and train stations.

Results—When asked about any negative effects on their physical health from using public transport, some interview participants reported ‘people smoking at the station’ (along with ‘time being sedentary’ and ‘winter ills’). Some specifically reported that while waiting for public transport, they were annoyed by tobacco smoke and smoker behaviour:

‘a lot of people smoke there every morning and that really affects those who don’t smoke, and the youngsters’
(man, Tongan, aged 19, train, Auckland)

‘the smoke was blowing right on us and I’m particularly concerned about my baby and for all of us really’
(woman, Pākehā/NZ European, 35–44 years, bus, Wellington)

‘at that time of the morning it is the last thing you want to inhale’
(woman, Māori, 34–44 years, bus, Wellington)

‘if they’re sitting at the top end of the seat it makes the rest of the seat uninhabitable’
(woman, Asian, aged 18, bus, Wellington)

‘I ended up smelling of smoke when I got to work’
(woman, European, aged 21, bus, Auckland)

‘I don’t really like it when people smoke in shelters’… ‘and specially if there are kids or elderly people around’
(woman, Samoan, aged 22, bus, Auckland).

In response to such concerns, several respondents reported moving away (even running ahead of the smoker walking in front of them), while others seemed fatalistic: ‘…there’s not much you can do about them’ (man, European, aged 41, train, Wellington).

Nevertheless, some participants (from both Auckland and Wellington) reported that their train station was a designated no-smoking area and that they had not seen people smoking in these settings.

The survey of waiting time activities indicated that 5.1% (25/491) of respondents waiting for buses and 3.3% (18/548) waiting for trains reported that they smoked. This compared to texting or phoning at 21.1% and 17.4% respectively. Smoking while waiting declined with age: 8.3% (13/156) for respondents aged ≤24 years; 6.2% (24/389) for 25–44 year olds; 1.7% (6/351) in 45–64 year olds; and 0% (0/133) in the 65+ age group.

Discussion—Overall, these New Zealand findings have some similarity with international evidence. For example, research in London (n=1000 respondents) found
that smoking was ranked the third most anti-social behaviour on public transport (after ‘shouting/swearing at others’ and ‘not paying fare’). It was ahead of 12 other anti-social behaviours including ‘spitting’, ‘drinking/being drunk’ and ‘dropping litter’ (though the latter is often related to smoking as well as per Wellington-based data).

The smoking-related data from this public transport study in Auckland and Wellington indicates that some public transport users self-report smoking as an activity while waiting. This is a concern given that such smoking contributes to general city air pollution and direct SHS exposure to people waiting nearby. Indeed, some of the exposed people provided statements that such smoking was a nuisance and they were concerned around its health effects.

There is some survey evidence to suggest that there is New Zealand public support for greater areas with smokefree policies. In a 2010 New Zealand survey, 76% (54% of smokers) agreed that ‘smoking should be banned in all outdoor public places where children are likely to go’.

These findings provide some additional arguments as to why local governments could consider expanding outdoor smokefree areas to include all bus stops and train platforms. Furthermore, if making the typical public transport experience more pleasant helps to shift people from private cars to public transport, this will have other health and environmental benefits (such as reducing air pollution, reducing carbon emissions and saving energy).

Marie Russell, Nick Wilson*, George Thomson
Department of Public Health, University of Otago, Wellington, New Zealand
*Email: nick.wilson@otago.ac.nz

Acknowledgement: The authors thank the study respondents for their cooperation and time.

Competing interests: Although we do not consider it a competing interest, for the sake of full transparency we note that all of the authors have previously performed funded work on tobacco control.

References: