Policy Brief

Routes of infection, routes to safety: Creative mapping of human-viral behaviours on the bus to understand infection prevention practices

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KEY INFO

Research questions:

- How can infection prevention practices be improved through understanding the microbial landscape of the bus?
- How can we better understand this microbial landscape as an intertwining between the ways different bus users visualise and sense the bus environment and the physical, material elements like other passenger bodies, bus architecture, viral particles and microbes?

Policy themes:

- Guidance, Messaging and Behaviour Change
- Places and Communities
- Equality, Diversity and Inclusion

Methods:

- Participant observations of bus-users
- Qualitative in-depth interviews with bus users, cleaners and drivers (70% Somali heritage).
- Bus microbiome swab-analysis.

Geographical area: UK-wide

Research stage: In progress, results of microbiome study not finalised and analysed.

Summary of the research

Public transport use has dropped during the pandemic, after government guidance advised against non-essential travel. This added to existing stigma about the dirtiness of buses. SARS-CoV-2's invisibility to the naked eye, and inconsistencies in public scientific understanding, create challenges in how stakeholders communicate infection prevention and how bus users respond.

Research was developed in dialogue with stakeholder groups, and involved ethnography and interviews, a microbiome study of buses on a single route, and the development of novel public information films to visualise microbial landscapes on the bus.

The research was undertaken by an expert interdisciplinary team across two universities, experienced in geography, microbiology and creative engagement.

The value of public health confidence on the bus is manifold: i) to reduce the risks of transmission of SARS-CoV-2 and other infections; ii) to recover the economic and social benefits of accessible travel; iii) to help reach COP26 goals around sustainable transport.

Policy recommendations

We recommend that government:

(1) Actively work to establish new cultures of co-responsibility and care for public health, among bus users, drivers and cleaners.
(2) Develop ways to communicate about dynamic microbial landscapes, rather than just generic risk.
(3) Consider accessibility issues – around disability and health, as well as cultural diversity – in building public health confidence and messaging on the bus.
(4) Recognise that people became bored with press conferences and government slogans, so seek ways to engage audiences in more creative ways to usher in confidence with a 'new normal'.

We recommend that bus operators and other stakeholders responsible for public spaces:

(5) Take into account scientific research about aerosol transmission and ventilation, in relation to COVID-19 and other respiratory conditions, in vehicle and timetable design.
(6) Acknowledge and respond to seasonal public health challenges by employing ventilation as a form of infection prevention throughout the year.
(7) Update and expand signage about mask wearing, social distancing and ventilation, taking into account different linguistic and cultural barriers.
(8) Develop more sophisticated ways of communicating about aerosols.
(9) Acknowledge that different bus users experience risk and confidence in different ways, and identify triggers for using more bespoke messaging at specific times for specific audiences.

Key findings

From our 60 hours of ethnography between February and October 2021, we observed the 'distortion' of the bus environment: fewer passengers, restricted seating, and adaptation to users' behaviours. Although unsettling at first, these had broadly positive implications for public health confidence.

Ethnography also showed that the employment of mask wearing, social distancing and window opening was inconsistent across bus operators and regions, as was signage about it.

In our 37 interviews (of 10 bus drivers, 22 bus users and 5 bus cleaners) between April and August 2022, we discovered recurrent themes: anxiety; coping with the new microbial landscape; perceptions of personal risk; altered sociality on the bus; the perceived value of social distancing and mask wearing.

We found that often, people's infection prevention practices initially followed government guidance, but as reliance on this waned, they were based on personal knowledges formed variously from news, social media, past experience and word of mouth.

Our research showed that public scientific understanding about the virus was inconsistent but that other imagination-led forms of communication such as stories and emotions can affect behaviour change.

Further information

Project outputs are all available here: https://generic.wordpress.soton.ac.uk/routestosafety/outputs/

(1) Report: 'Understanding Microbial Landscapes of the Bus During the COVID-19 Pandemic'
(2) Workshop 'Communicating through COVID-19: Public Health, Public Transport and Infection Prevention'
(3) Short films 'You're Never Alone on the Bus', made with film maker Joseph Turp.

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