

Evaluating the impact of using mobile vaccination units to increase COVID-19 vaccination uptake: A synthetic control analysis

Background

Mobile vaccination units are vaccine provision that is temporally introduced into a neighbourhood using a large vehicle such as a bus or 'pop-up clinic'.

Method and data

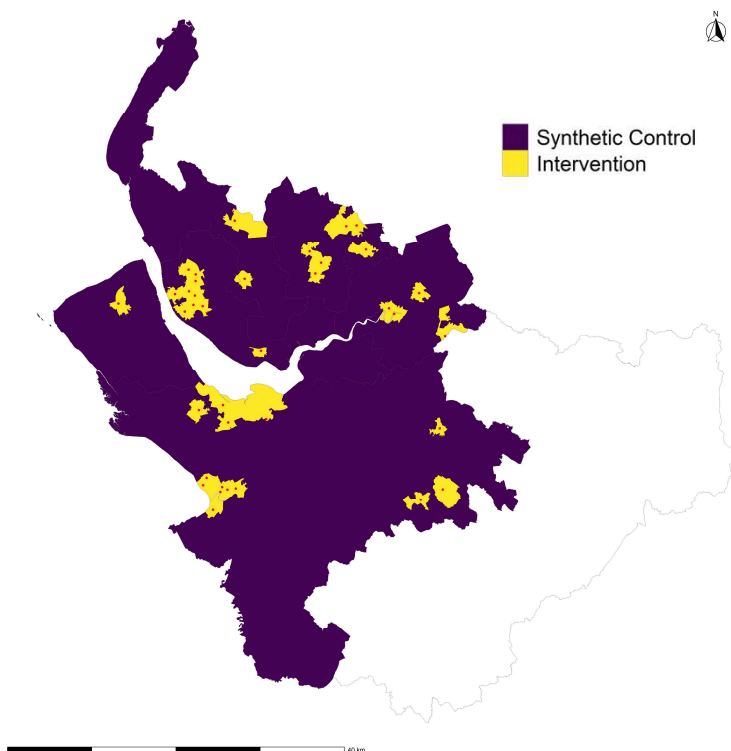
Design Synthetic control analysis.

Setting Population registered with GP in Cheshire & Merseyside.

Intervention Mobile vaccination units that visited 37 sites on 54 occasions between 12th April and 28th June in 2021. We defined populations as having received the intervention if they lived within 1km of a mobile vaccination site. A weighted combination of neighbourhoods that had not received the intervention was used to construct a synthetic control group.

Outcome Weekly number of first-dose vaccines received among adults as a proportion of the population.

Figure 1. Location of eligible mobile vaccination units (red dots) and the non-intervention (purple) and intervention (yellow) areas across Cheshire & Merseyside.



Results

Figure 2. Trends of the weekly vaccination rate with their 95% confidence intervals in the intervention and synthetic control.

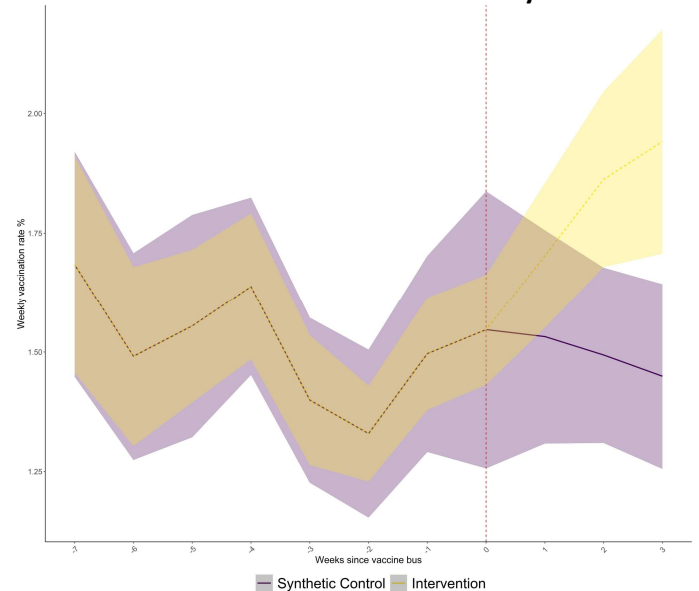
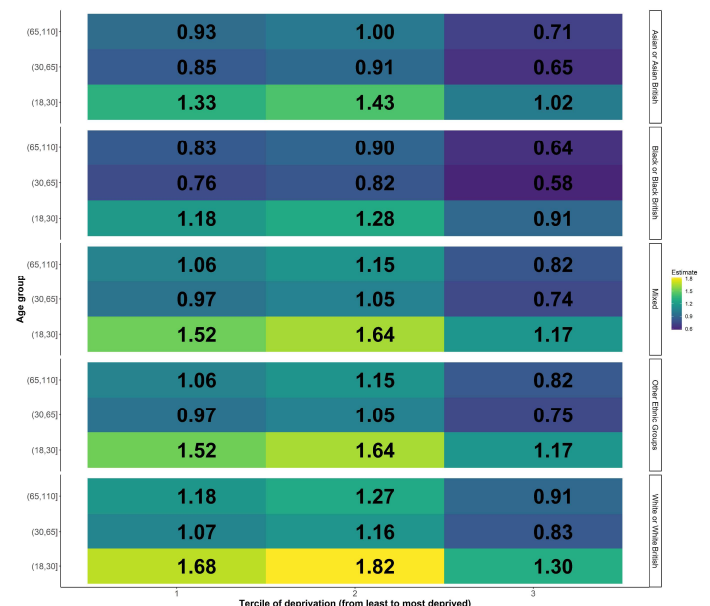


Figure 3. Estimated impact of the mobile vaccination units for all the subgroups based on interaction analysis.



Conclusions

- Mobile vaccination units are effective in increasing vaccination uptake.
- They may increase inequalities in vaccine uptake within targeted areas.
- They should be used in combination with activities to maximise outreach with Black and Asian communities and socioeconomically disadvantaged groups.

Zhang, Xingna and Tulloch, John and Knott, Shane and Allison, Rachel and Parvulescu, Paula and Buchanan, Iain and García-Fiñana, Marta and Piroddi, Roberta and Green, Mark and Barr, Ben, Evaluating the Impact of Using Mobile Vaccination Units to Increase COVID-19 Vaccination Uptake: A Synthetic Control Analysis for Cheshire and Merseyside, UK (January 27, 2022). Available at SSRN: <https://ssrn.com/abstract=4018689> or <http://dx.doi.org/10.2139/ssrn.4018689>