Restricting junk food advertising can save lives and money, and reduce health inequalities

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About the research
Eating food high in fat, salt, and sugar (HFSS) contributes to weight gain, which can result in illnesses. We need value-for-money ways to support people to have healthier diets, and policies which reduce health inequalities.

When Transport for London (TfL) introduced a policy to restrict advertising of HFSS foods on its network in 2019, studies found that people ate and bought fewer ‘junk food’ calories. Until now, these studies had not accounted for the impact of advertising restrictions on people’s health and NHS expenses, and whether people in more deprived areas would benefit more or less than those in affluent areas over time. Understanding this could help policymakers decide whether bans are worth implementing, given that the public sector may lose income from advertising revenues.

We developed a model, an advanced mathematical method, to describe the health of the adult population of Greater London when the policy was introduced. We used existing data to estimate the long-term health of that population over time, including the number of diabetes, cardiovascular disease events, and cancer cases. Next, we assessed the NHS expenses associated with these health events, taking into account several factors such as weight, ethnicity and whether the individuals lived in a poor neighbourhood (Figure 1).

Health and economic benefits
We estimate that banning junk food advertising in TfL during 2019 resulted in:

- 94,867 fewer cases of obesity after one year
- 2,857 cases of diabetes prevented after 3 years
- 1,915 fewer cases of cardiovascular diseases (CVD), such as heart disease and stroke, after 3 years
- 16,394 more Quality Adjusted Life Years (QALY) over the population lifetime – QALYs measure improvements in the duration and quality of life compared to a situation without the policy.

Key findings
- The policy reduces obesity (Figure 2) and CVD (Figure 3) among all people, with larger benefits for those living in the most deprived communities.
- Preventing health conditions among people living in poorer areas could reduce health inequality in London.
- Although fewer people use public transport outside London, the policy is still likely to generate health benefits and reduce inequalities.

Restricting junk food advertisements could save the NHS £218 million over the lifetime of the current population.

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Figure 1: NHS savings due to the reduction of related costs

- Other: £110 millions
- CVD: £61 millions
- Neuropathy (amputations and foot ulcers): £14 millions
- Social care: £13 millions
- Renal: £10 millions
- Diabetes management: £10 millions

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Building the evidence base for cost effective public health practice
We ran our model in two scenarios:
1) no restrictions and 2) with advertising restrictions, which resulted in a lower calorie consumption, without reducing advertising revenue. We compared the health events and NHS expenses in the two scenarios and looked at whether the benefits were evenly distributed across the population. Read the details at: doi.org/10.1186/s12966-022-01331-y

Currently, we are analysing other scenarios to estimate the potential benefits of similar restrictions policies in areas outside London, which have different demographics and public transport use.

Find out more: nihrsphr.link/foodequity

**Further information**

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**Recommendations for local authorities**

- Reduce public transport users’ exposure to junk food adverts.
- Restrict junk food adverts in some other areas, such as busy roads and high streets.

Restricting junk food advertising is an effective and value-for-money policy intervention which could improve health, save money for the NHS and reduce health inequalities (Figure 2).

**Contact the researcher**

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**About the School**

The NIHR School for Public Health Research is a partnership between the Universities of Sheffield; Bristol; Cambridge; Imperial; and University College London; The London School for Hygiene and Tropical Medicine (LSHTM); LiLaC – a collaboration between the Universities of Liverpool and Lancaster; and Fuse - The Centre for Translational Research in Public Health a collaboration between Newcastle, Durham, Northumbria, Sunderland and Teesside Universities.

**Figure 2: Obesity cases by Index of Multiple Deprivation (IMD)**

**Figure 3: Reduction in CVD cases over time**

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