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Research Article

Population health and health sector cost impacts of the UK Soft Drinks Industry Levy: a modelling study

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Plain language summary

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Plain language summary

The Soft Drinks Industry Levy was introduced in the United Kingdom in April 2018. The levy charges soft drink manufacturers and importers based on sales of their soft drinks and the amount of sugar they contain. Previous evaluations of the levy have shown that it resulted in large reductions in the sugar levels of soft drinks and changes in purchasing behaviour. This resulted in a reduction of 8 g of sugar purchased per household per week. Our modelling study considers what impact that reduction in sugar would have on the health of the United Kingdom population and the amount of money we spend on health care.

We built a model to estimate how the levy changes the prevalence of overweight and obesity and the number of new cases of diabetes, cardiovascular disease, cancer and dental caries (decayed missing or filled teeth). The model also estimates how the levy changes healthcare use (e.g. visits to general practitioners and stays in hospital) and calculates the economic costs of these changes. Our model is a simulation of the entire United Kingdom population (including both children and adults) starting in the year 2015 and following them for the rest of their lives.

We found that the levy would not only result in a small reduction in the prevalence of overweight and obesity but also in large falls in the number of new diseases. In the first 10 years after implementation of the levy, there would be 12,000 fewer cases of type 2 diabetes, 3800 fewer cases of cardiovascular diseases, 350 fewer cases of obesity-related cancers and 270,000 fewer dental caries. Over the lifetime of this population, that would result in £174 million of savings in healthcare costs.

This study provides further evidence that sugar-sweetened beverage taxes have the potential to achieve meaningful improvements in population health and reduce health sector spending.