Background The UK soft drinks industry levy (SDIL) is a two-tiered tax on manufacturers and producers of sugary soft drinks, announced in March 2016 and implemented in April 2018 aimed at reducing sugar intake through reformulation. High-tier drinks ($\geq$8 g of sugar per 100 ml) are taxed at £0.24 per litre and low-tier drinks ($\geq$5–<8 g of sugar per 100 ml) at £0.18 per litre.

We examined whether there were changes in the volume of, and amount of sugar in, purchases of soft drinks as a result of the levy, and substitution to confectionery or alcohol.

Methods Using a representative commercial household take home purchasing panel (average weekly households n=22,183; 264 weekly time points from March 2014 to March 2019), we undertook interrupted time series analyses using purchases of toiletries (shampoo, conditioner and liquid soap) as a control to compare observed purchases with a modelled counterfactual for: a) all soft drinks combined irrespective of levy eligibility or levy-tier; b) levy-eligible drinks by tier; c) confectionary; and d) alcohol. Results are weighted to represent an average UK household.

Results When all soft drinks were combined, irrespective of levy eligibility or tier, there was no change in the purchased volume in March 2019, however, sugar purchased in drinks reduced by -29.8 g (95% CI -55.7, -3.8), or -10.3% (95% CI -18.5, -2.1).

Amongst levy-eligible drinks, purchased volume of high-tier drinks had reduced by -155 ml (95% CI -240.5, -69.5), with a corresponding reduction in sugar of -18.0 g (95% CI -32.3, -3.6) per household per week. Purchases of levy-eligible low-tier drinks fell by -177.3 ml (95% CI -225.3, -129.3) with a -12.7 g (95% CI -14.7, -10.6) reduction in sugar in these drinks, equivalent to -88.3% (95% CI -94.0, -82.7). Purchased volume of levy-eligible drinks with <5 g of sugar per 100 ml did increase, though non-significantly by 210.5 ml (95% CI -100.1, 521.1), though there was an increase in sugar of 15.3 g (95% CI 12.6, 17.9), equivalent to 166.4% (95% CI 94.2, 238.5).

There were no changes in purchases of confectionery or alcohol.

Conclusion As of March 2019, we estimate that the SDIL had reduced the amount of sugar in drinks purchased by about 30 g per household per week (equivalent to one can of Coca-Cola). There was no overall reduction in purchased drink volume indicating this may represent a ‘win:win’ for public health and industry.

On behalf of the NIHR PHR SDIL Evaluation Team.