


DRUG & ALCOHOL FINDINGS *Research analysis*

This entry is our analysis of a study considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original study was not published by Findings; click [Title](#) to order a copy. Free reprints may be available from the authors – click [prepared e-mail](#). The summary conveys the findings and views expressed in the study. Below is a commentary from Drug and Alcohol Findings.

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► Impact of low and no alcohol beers on purchases of alcohol: interrupted time series analysis of British household shopping data, 2015–2018.

Anderson P., Llopis E.J., O'Donnell A. et al.
BMJ Open: 2020, 10(e036371).

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As the most popular alcoholic beverage in the UK, could beer be a good vehicle for reducing alcohol-related harm? Innovation around low-to-no alcohol and reduced-alcohol beers may offer a way to reduce the grams of alcohol purchased by consumers while preserving the experience of drinking.

SUMMARY There is a [global target](#) to reduce harmful drinking by 10% between 2010 and 2025, but recent analyses [indicate that](#) the target will not be achieved. One way of trying to get closer to this aim, which would hinge on the support and innovation of the alcohol industry, is to change the alcohol market by introducing products with reduced alcohol content ([1](#) [2](#)). The logic is that by replacing standard alcoholic beverages with similar beverages of lower alcoholic strength, or by switching to low- and no-alcohol alternatives for part of the time, drinkers would end up drinking fewer grams of ethanol while still being able to maintain the experience of drinking.

From a public health point of view, alcohol-reduction initiatives might have a parallel in salt-reduction initiatives, which have taken the [form of](#) introducing new products with less salt, reformulating existing products to contain less salt, and encouraging people to switch from one product with higher salt concentration to another product with lower salt concentration. The evidence [suggests that](#) almost all salt consumption reductions have been achieved by reformulating products rather than by introducing new products with less salt.

The aim of the featured study was to assess the impact on the off-trade alcohol market in Britain between 2015 and 2018 of new or reformulated low- and no-alcohol beers and beers. A new low- or no-alcohol beer product was defined as a product new to the market in 2015–2018, with an alcohol content of 3.5% or less. A reformulated product was one where its alcohol content had been reduced by 0.11% or more.

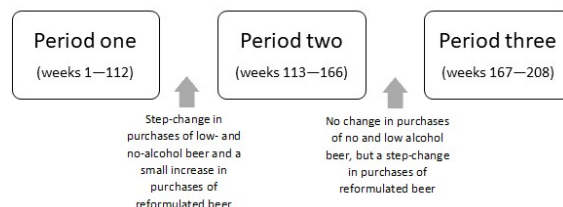
The study analysed British household shopping data covering a total of 64,286 different households and more than 3.3 million alcohol purchases, guided by two key questions:

1. To what extent have households been purchasing beer products newly-developed or reformulated to contain less alcohol or no alcohol, and have these purchases differed by demographics (eg, age of main shopper, [geographic region](#), [income group](#), and [socioeconomic status](#) of households)?
2. To what extent have purchases of newly-developed or reformulated beer products been associated with changes in the purchases of grams of alcohol, and have these changes differed by demographic characteristics of households?

Trends in alcohol purchases were plotted over time, facilitating the discovery of any immediate or sustained effects of introducing low- and no-alcohol beers and reformulated beers. For most of the UK this was the main change to the alcohol market during the time frame. Scotland was the exception, which saw the introduction of a [minimum unit pricing](#) policy in May 2018.

This data revealed three time periods, separated by two 'events' or changes in the alcohol market ([► figure](#)):

- Event one (between period one and two): a step-change in purchases of low- and no-alcohol beer and a small increase in purchases of reformulated beer.
- Event two (between period two and three): no change in purchases of no and low alcohol beer, but a step-change in purchases of reformulated beer.



Main findings

Purchases between 2015 and 2018

New and reformulated products occupied an increasing share of the beer market over the course of the study: 0.5% in period one; 4.6% in period two; and 10.5% in period three.

Purchases of low- and no-alcohol beer products were very low during period one, increased during period two, and remained stable during period three. Purchases of reformulated products were very low during period one, increased during period two, and increased substantially during period three. By period three, purchases of reformulated products were considerably higher than new low- and no-alcohol products at 40.7 ml average weekly purchases versus 15.2 ml, out of a total 588.0 ml average weekly purchases of all beer.

A single product dominated purchases in each category:

- One new product of beer with 3.5% alcohol content was responsible for 64% of all new low- and no-alcohol beers purchased during periods two and three.
- One product whose alcohol content had been reduced from 4.8% to 4.5% was responsible for 71% of all reformulated products purchased during period three.

The volume of purchases was considerably higher among younger shoppers, and among higher-purchasing households.

The impact of purchases between 2015 and 2018

New and reformulated beer products were associated with the following changes:

- an overall reduction in the alcohol content of beer of 1.2–2.3%;
- a reduction in purchases based on grams of alcohol in beer of 7.1–10.2%;
- a reduction in purchases based on grams of alcohol in general of 2.6–3.9%.

The upward turn in purchases of low- and no-alcohol beer products was associated with a slight decrease in the average alcohol content of beer, and a plateau in grams of alcohol purchased within beer and grams of alcohol purchased overall (► [image](#)). The upward turn in purchases of reformulated beer was more influential, as shown by significant decreases in the average alcohol content of beer, grams of alcohol purchased within beer, and grams of alcohol purchased overall (► [image](#)).

Greater reductions in grams of alcohol purchased were observed among younger shoppers, and among people buying the greatest amounts of alcohol. These two groups also purchased more new and reformulated products than other groups, offering validation of the link between these groups and greater reductions in grams of alcohol purchased.

Drops in purchases of grams of alcohol within beer did not substantially differ by socioeconomic status or household income. Drops in purchases of alcohol within beer occurred in all five areas of Great Britain, although were larger in Scotland – possibly a reflection of the introduction of minimum unit pricing in period three.

The authors' conclusions

Low- and no-alcohol beers and beers reformulated to contain less alcohol were associated with reductions in total grams of alcohol purchased and grams of alcohol in beer purchased by UK households between 2015 and 2018. These reductions were greatest among younger shoppers and households buying higher quantities of alcohol.

A key strength of the study was its use of data from purchases of alcohol verified through shoppers scanning product barcodes, rather than purchases based on recall. However, the data also had several limitations: it may not capture all beer purchases, for example purchases outside of the primary shop; it may exclude certain segments of the population that are more likely to be heavy drinkers, such as homeless people, and may under-represent single-adult households; and it cannot show changes in actual consumption, only household purchases.

The study also took place over less than four years, allowing for only two years following the step-change in purchases of low- and no-alcohol beer, and less than a year following the step-change in purchases of reformulated beer. Studies of salt-reduction initiatives have [documented changes](#) over a six-year period. In the future, studies of alcohol-reduction initiatives could aim to match this longer follow-up.

Overall, despite evidence of positive changes, the beer industry has yet to live up to its responsibilities to address its products in such ways as to materially reduce alcohol-related harm. Due to their high volume of sales, at least in the UK market this is probably best achieved through the reformulation of existing regular-strength beer products to contain less alcohol.

FINDINGS COMMENTARY Beer was the [most popular](#) alcohol beverage in the UK in 2018 according to the British Beer and Pub Association – outselling wine and cider at 48,559,000 hectoliters versus 12,901,700 and 6,804,000 hectoliters respectively. As the featured study demonstrated, there is also room for further innovation with beer, giving the alcohol industry the opportunity to reduce alcohol-related harm through the products they put on the market.

Between 2015 and 2018, new and reformulated products were associated with small reductions in total grams of alcohol purchased and grams of alcohol in beer purchased by a large sample of UK households. The largest reductions came via products that had been reformulated, and 71% of purchases of these were of a single product whose formulation was changed slightly to contain 4.5% rather than 4.8% alcohol.

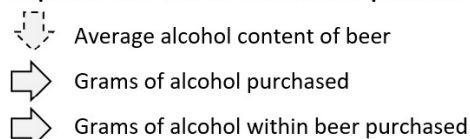
The indication that grams of alcohol purchased at a population level could be reduced, but that not all products stand to make the same impact, led the authors to conclude that alcohol producers should focus their efforts on reducing the alcohol content of existing regular-strength beer products, which have a high volume of sales. Further research could address *why* this might be the higher-impact strategy – for example, whether incrementally reducing the alcohol content of standard beer products is more effective than introducing low-to-no alcohol products because it simply circumvents the need to convince consumers to switch to other products or for consumers to make a conscious decision to reduce harm.

People drink for many reasons including relaxation, stress-relief, companionship, relationship-building, intoxication, and indeed pleasure. Trying to reduce the harm associated with beer through changing the market must therefore contend with the questions of how acceptable various products are from a consumer point of view, and if pleasure can still be retained through new and reformulated products, and whether or not (or to what degree) drinkers are also motivated to reduce harm.

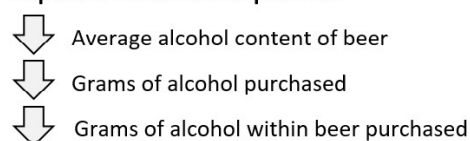
Population-level levers and industry involvement

For England and Wales the 2012 [UK alcohol strategy](#) seemed a turning point in alcohol politics – adopting a

Impact of low- and no-alcohol beer products



Impact of reformulated products



public health perspective that framed heavy drinking as one of the three biggest lifestyle risk factors for disease and death after smoking and obesity. The causes of the problem were said to include cheap and too readily available alcohol due to prioritising industry needs and commercial advantages over health concerns. One of the solutions proposed was [minimum unit pricing](#), which would involve setting a uniform minimum price per unit of alcohol across all drinks, thereby substantially raising the cost of cheaper and stronger products. Then Prime Minister David Cameron [said](#):

"When beer is cheaper than water, it's just too easy for people to get drunk on cheap alcohol at home before they even set foot in the pub. So we are going to introduce a new minimum unit price. For the first time it will be illegal for shops to sell alcohol for less than this set price per unit."

"This isn't about stopping responsible drinking, adding burdens on business or some new kind of stealth tax – it's about fast, immediate action where universal change is needed."

However, by the following year minimum unit pricing had been dropped, and one of the main reasons seemed to be the objections of the alcohol industry. [According to](#) the *British Medical Journal*, shortly before the minimum pricing reversal public health minister Anna Soubry had met [seven industry representatives](#) who voiced their "deep concern" that minimum pricing would damage voluntary and collaborative agreements between private and public bodies, as well as hitting Treasury revenues.

One of these voluntary and collaborative agreements reportedly put in jeopardy by minimum unit pricing was the [Public Health Responsibility Deal](#), originally launched in 2011 by the UK Department of Health. This asked alcohol and retail industry bodies to sign up to [pledges](#) to implement guidelines or meet targets on issues such as under-age sales, responsible marketing, and labelling. The introduction of low- and no-alcohol beers and beers reformulated to contain less alcohol lined up with pledge number eight:

"As part of action to reduce the number of people drinking above the guidelines, we have already signed up to a core commitment to foster a culture of responsible drinking which will help people drink within guidelines. To support this we will remove 1bn units of alcohol sold annually from the market by December 2015 principally through improving consumer choice of lower alcohol products."

However, measures industry bodies agreed to were usually [already completed](#) or underway – rather than being prompted or compelled by the Deal – and even if implemented, [were unlikely](#) to significantly improve health.

In the latter part of the featured study, the Scottish Government [introduced](#) a £0.50 minimum price after five years' opposition from the Scotch Whisky Association. This coincided with larger drops in purchases of grams of alcohol during period three for Scotland than other regions of Britain. [Another study](#) plotted trends in alcohol purchases over the same time period (2015–2018) with a focus on minimum unit pricing, enabling its impact to be quantified. Before the introduction of minimum unit pricing, the average price of pure alcohol sold in Scotland was 8.11p per gram, and the amount of alcohol purchased per individual per household aggregated by week was 124.8 g. Minimum unit pricing brought about a price increase in Scotland of 0.64p per gram and a reduction of 9.5 g in alcohol purchased per adult per household per week, or 328 g of ethanol (41 UK units) sold per adult per household per year. The largest reductions in consumption were found for beer, spirits, and cider – categories that include the own-brand spirits and high strength white ciders that minimum unit pricing sought to target.

Scotland was the only region in the featured study to implement the two different types of interventions at the same time, each underpinned by different assessments of how alcohol-related harm occurs: minimum unit pricing aims to undo the harm caused by low prices that make it 'easy' to drink large quantities of strong alcohol; and new and reformulated products help to diversify the market, enabling people to make 'healthier' choices or benefit from marginal reductions in alcohol of what they are already drinking. For both types of intervention there was evidence that the impact was greater among households purchasing the largest amounts of alcohol.

The Effectiveness Bank [hot topic](#) "A minimum price for drink?" examines the evidence base for and against minimum unit pricing.

Thanks for their comments on this entry in draft to research author Professor Peter Anderson of Newcastle University (England) and Maastricht University (Netherlands). Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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series

STUDY 2010 Changes in alcohol consumption and beverage preference among adolescents after the introduction of the alcopops tax in Germany