



Public Health
England

Protecting and improving the nation's health

Review of typical ABV levels in beer, cider and wine purchased for the 'in home' market

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Executive summary

This report suggests the need for updating or further harmonisation of government survey questions relating to alcohol consumption, using the Health Survey for England (HSE) as an example.

To inform this discussion, we analysed the average alcohol by volume (ABV) of alcohol products purchased on the market.

The most important findings of the report are:

- the sales-weighted ABV of all beer, lager and cider purchased is 4.6%. This is similar to the 4.5% assumed in the current conversion table for bottles and cans of beer, lager and cider
- cider differs from beer and lager by having a greater proportion of total purchases with a sales-weighted average ABV above 5%; and a greater proportion of total purchases with an ABV of 6% and above as well. This suggests beer, lager and cider should be treated separately in HSE questions and any revised conversion table
- the current definition of 'strong' products being 6% and above means that only 2.6% of all beer/lager purchased and 14.3% of all cider purchased are included in the category
- the sales-weighted average ABV of wine is 11.9% which is identical to the current conversion table's figure
- beer, lager, wine, cider and spirits account for 97.2% of all alcohol purchased. The product list used in HSE should be updated to show this number

Background

In June 2018, the alcohol theme group of the English Health Statistics Steering Group (EHSSG) hosted a workshop with alcohol users and experts. The workshop concluded that there is a need to consider updating the product list and conversion table¹ in the Health Survey for England (HSE), and to consider whether new HSE questions are needed to reflect current policy concerns.

Currently, the distinction between 'normal' and 'strong' beer or cider is made at 6% alcohol by volume (ABV) in the HSE. However, the alcohol theme group expressed the view that beers over 5% should perhaps be considered 'strong' as there are very few beers on the market over 6%. The group suggested that further analysis of the products on the market would be helpful to determine where the most appropriate cut-off should be.

Alcohol harmonisation workshop participants found that the current conversion table is now out-of-date. In particular, the group questioned whether beer and cider should be considered separately and queried the assumption that the average strength of wine is 12% ABV. This report uses sales data to test each of these assumptions and to help to find a suitable cut-off for 'strong' beer and cider.

¹ The conversion table translates drink type by volume into units based on conversion factors that have been in use since 2007. For more information, see: National Statistics publication estimating alcohol consumption from survey data: updated method of converting volumes to units, 2007.

Overview & Aims

The wider aim of the project is to consider the need for updating or further harmonisation of government survey questions relating to alcohol consumption. This report contributes to this discussion while highlights potential changes to the Health Survey for England (HSE), and more specifically, the following questions:

- what is the average ABV of products currently purchased on the market?
- is there a difference in the average ABV of beer/lager and cider such that they should be separated in the HSE?
- what is the 'normal' strength of beer/lager and cider purchased and is there a more appropriate cut-off for 'strong' products than the 6% currently used in HSE?
- is the 12% average ABV currently used in the HSE conversion table reflective of wine sales?

Data & Analysis

Kantar Worldpanel dataset 2018

This report analyses data for manufacturers and retailers own label branded products taken from Kantar Worldpanel's commercial consumer panel. The Kantar Worldpanel data offers volume sales and nutrition information for retailers and manufacturers and ran for the year ending September 2018².

Kantar Worldpanel collects nutrition data from food labels on individual products via fieldworkers who visit retail stores on a rolling 6-monthly basis. Where nutrition data have not been collected for a product, Kantar Worldpanel imputes nutrition values based on similar products in their dataset.

Kantar Worldpanel's sample of households reflects the demographic makeup of the British population. Demographic targets for the sample are based on region, social class, age of main shopper, household composition and household size. The data collected are weighted to give a realistic picture of total food and drink purchase for the period for which data are provided.

This report does not calculate ABV based on a conversion table because the currently available conversion table is also recommended for review as part of the wider work on this topic. Additionally, the conversion table does not separate beer and cider, which is important to note. The Kantar dataset contains a long description of each product including the ABV as given on the product label (ABV information is provided for 100% of beer/lager and cider products and 96.9% of all wine products). This was extracted from the text field and used as the ABV for each product.

From the full 2018 Kantar dataset, an alcohol-specific subset was taken and appropriate analysis performed. The average (mean) alcohol by volume of each product has been weighted by its total sales volume to give more influence to products with higher sales' results. This is the sales-weighted average (SWA).

² Specifically, the 2018 dataset covers the 52 weeks ending 09 September 2018.

Analysis of beer, cider and wine sales to identify most commonly purchased products as a precursor to a review of typical ABV levels

Limitations

- the dataset only includes household sales of alcohol products and does not include out-of-home drinking. The dataset does offer a very large sample, containing a total of 2,802,192,430 litres of alcohol products purchased over the year
- the dataset has limited granularity and does not permit an analysis by gender. This prohibits investigation into the idea suggested at the workshop that female drinkers are consuming cider at a higher rate than in the past

Results – Average ABV

Beer, lager and cider

The sales-weighted average ABV for all beer/lager and cider products purchased for the year ending September 2018 is 4.6%.

The sales-weighted average ABV for all beer and lager products is 4.4%, while it is higher for all cider products at 4.9%. These ABVs should be considered typical for beer, lager and cider purchased to year ending September 2018 and used to inform future discussions about 'normal' strength.

Wine

The sales-weighted average ABV for all wine products purchased for the year ending September 2018 is 11.9%. This is consistent with the currently used estimated ABV of 12.5%, which is rounded down to 12.0%. The currently used ABV does not unduly underestimate typical consumption, but the figure is influenced by the lower average ABV of rosé and sparkling wines. The sales-weighted average ABV for all red wine purchased is 12.9%, while it is 12.0% for white wine, 10.5% for rosé wine, and 9.5% for sparkling wine.

All alcohol sales

Beer and lager (42.7%) are the most popular category of alcohol purchased, followed by wine (31.2%) and cider (15.4%; Table 1). Considered together, beer, lager, cider, and wine account for 89.3% of all alcohol purchased to year ending September 2018.

In 2016 PHE funded additional questions on HSE about cider. Data suggests that 15% of all beer and cider drinkers only drank cider and that this proportion increases to 29% for 16 to 24-year-olds. In contrast, very few adults now drink sherry and martini, but these drinks are specifically asked about in the HSE survey module.

There is a need to update the product list used by HSE to reflect current drinking habits. Table 1 shows how the top 4 categories (beer/lager, wine, cider, spirits) account for 97.2% of all alcohol purchased, therefore the questions used by HSE should reflect this.

Table 1. All household alcohol sales by product category, 2018

Product category	Total annual reported volume (litres)	Proportion (%)
Beer/lager	1,195,302,620	42.7
Wine/sparkling wine	874,966,840	31.2
Cider	432,005,030	15.4
Spirits	221,772,690	7.9
FABs ³	38,284,770	1.4
Fortified wines	25,956,620	0.9
Non-alcoholic beer	13,903,950	0.5
Total	2,802,192,520	100.0

³ FABs are Flavoured Alcoholic Beverages, also known as alcopops.

Beer/lager sales

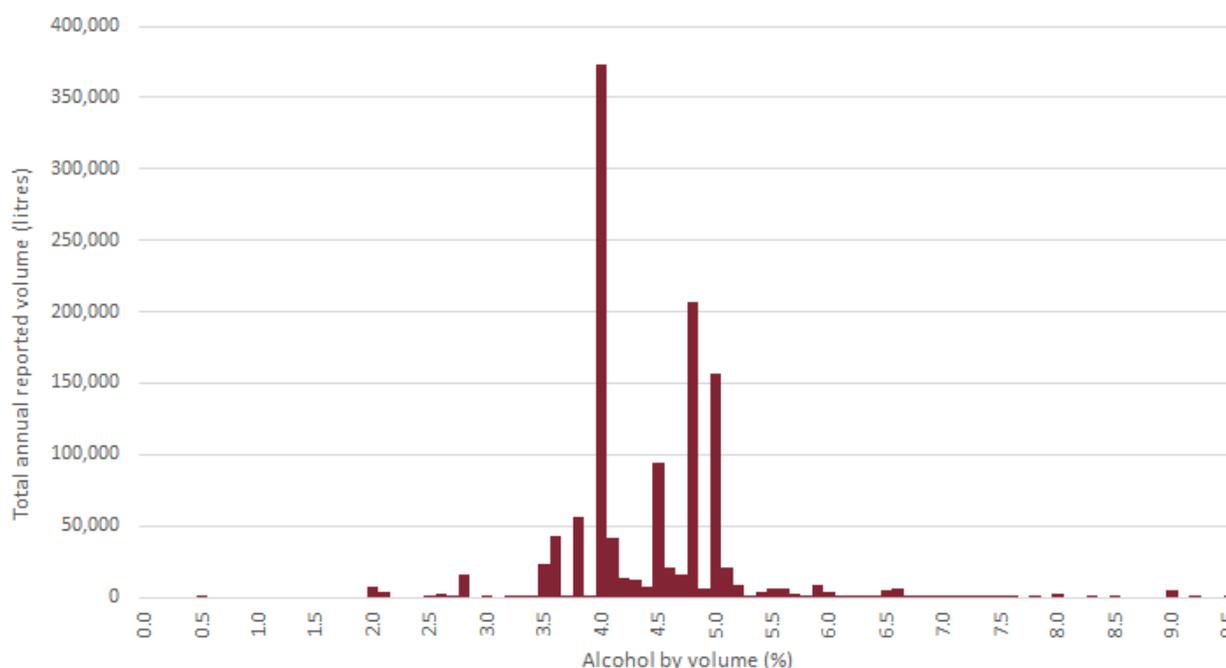
Regarding beer/lager sales, products currently considered ‘strong’ (6% ABV and above) account for only 2.6% of all sales. This confirms the view of the alcohol theme group that there are very few beers on the market over 6%.

As shown in Table 2, products with an ABV of between 5% and 6% account for 18% of all beer/lager sales. This means that the majority of beer/lager purchased remains under 5% ABV. This category includes several popular brands such as Stella Artois, Budweiser, Becks, and Carlsberg Export with an ABV of 4.8%⁴. While they fall below 5%, it can be argued that these types of drinks are commonly considered to be stronger lagers.

Table 2. All beer/lager sales by ABV, 2018

ABV	Total annual reported volume (litres)	Proportion (%)
Under 5%	948,829,790	79.4
5-6%	214,934,958	18.0
6% plus	31,537,875	2.6
Total	1,195,302,623	100.0

Figure 1. All beer/lager sales by ABV, 2018



Source: Public Health England analysis of Kantar Worldpanel data, 2018.

⁴ It is worth noting that Stella Artois, Budweiser, and Becks are all made by ABInBev – the world’s biggest brewer – who reduced the alcohol content of these products by 0.2% in 2012 to cut manufacture costs and duty costs to the UK Government.

Cider sales

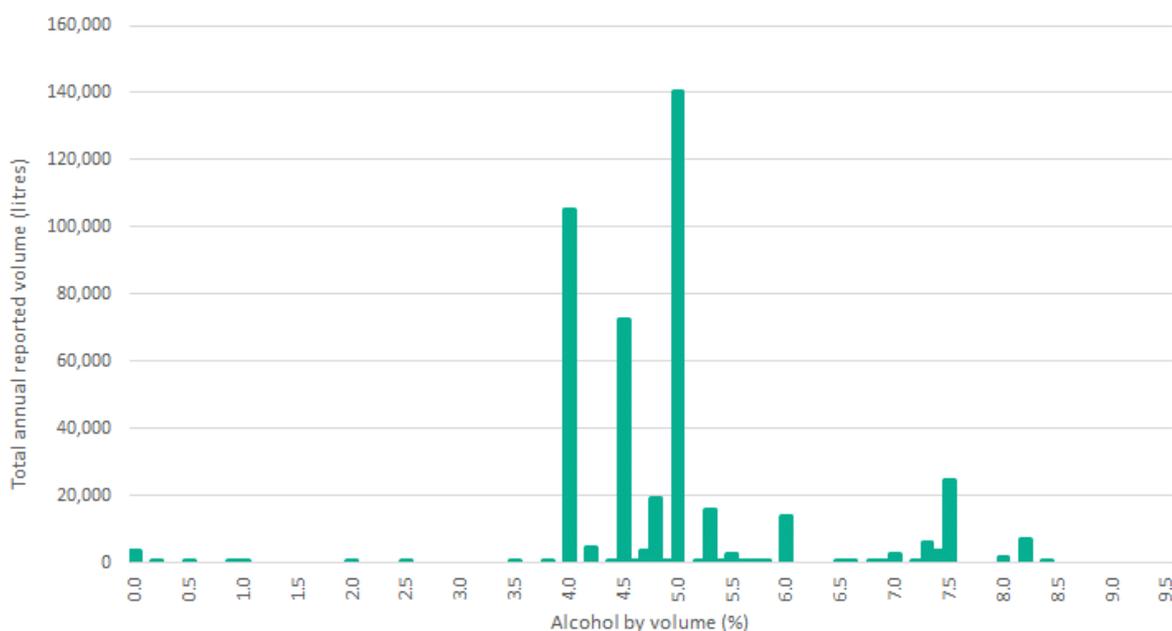
The current product list used by HSE combines beer and lager and cider drinking, therefore it is not possible to separately identify cider drinking. In recent years, cider became a lot more popular, particularly among younger people, with many new products launched onto the market.

Cider differs significantly from beer/lager sales, as a far greater proportion of total purchases have an ABV of 5% and above. As shown in Table 3, there is also a greater proportion of purchases with an ABV of 6% and above. This suggests that, in the future, cider should be treated separately in HSE questions and in revised conversion tables.

Table 3: All cider sales by ABV, 2018

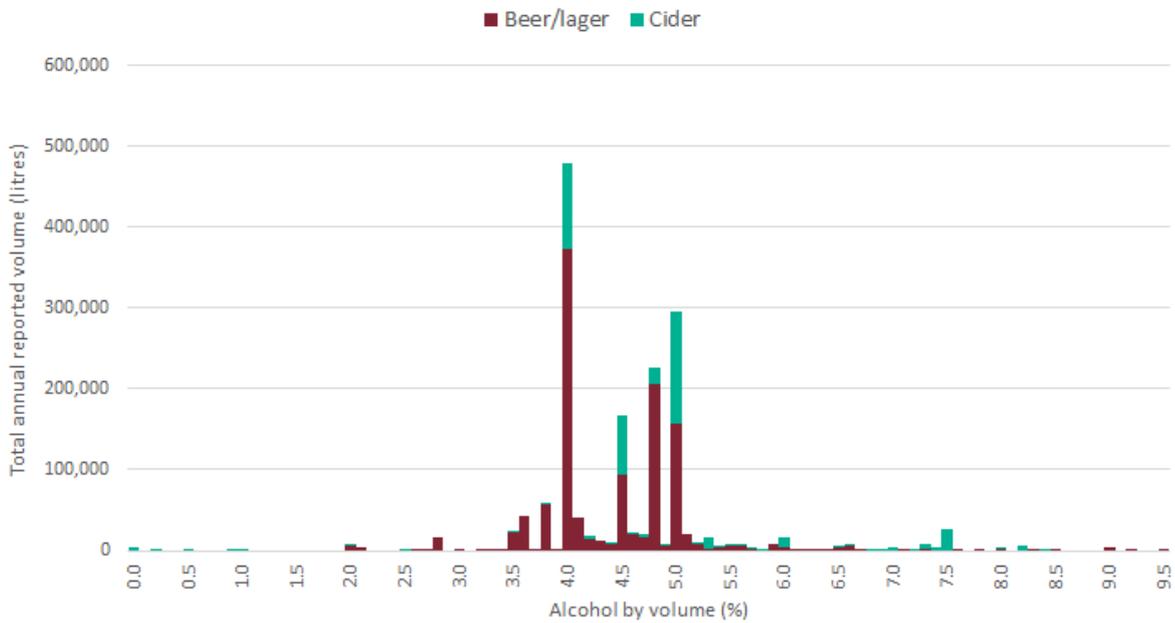
ABV	Total annual reported volume (litres)	Proportion (%)
Under 5%	211,038,162	48.9
5 to 6%	159,392,275	36.9
6% plus	61,574,588	14.3
Total	432,005,025	100.0

Figure 2. All cider sales by ABV, 2018



Source: Public Health England analysis of Kantar Worldpanel data, 2018.

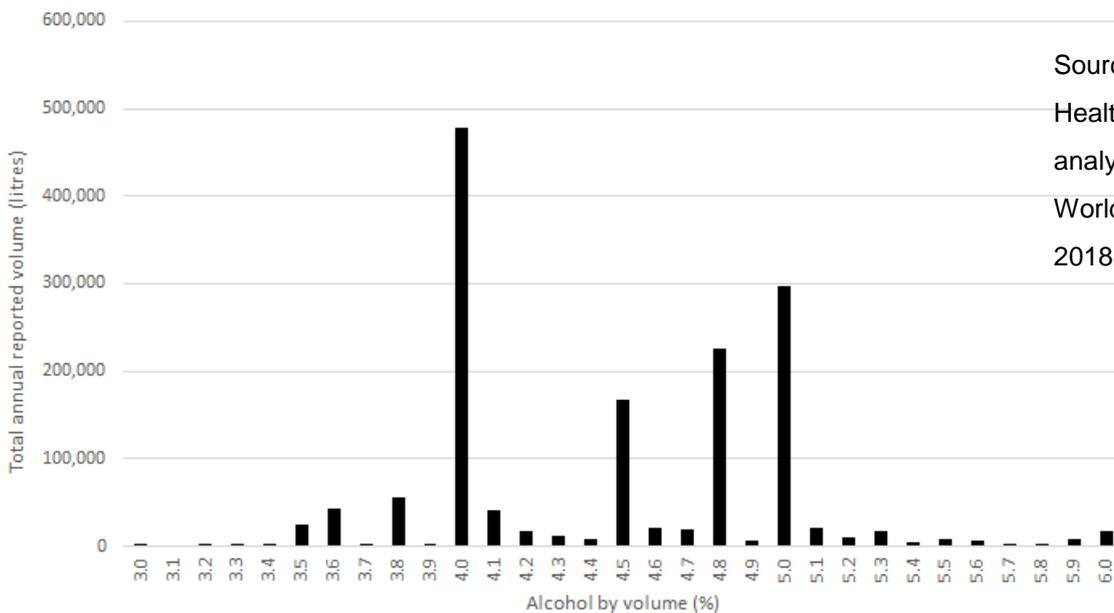
Figure 3. All beer/lager and cider sales by ABV, 2018



Source: Public Health England analysis of Kantar Worldpanel data, 2018.

Figure 4 shows only those purchases of beer/lager and cider combined with an ABV between 3% and 6% to inform discussions about the potential of a ‘natural’ cut-off for stronger drinks of this type. One sensible suggestion is to draw a cut-off at 4.8%, the first significant peak after the average ABV point for these drinks (4.6%). This would include drinks such as Stella Artois, Budweiser, Becks, and Carlsberg Export that currently fall just below 5%, but are commonly considered as stronger lagers.

Figure 4. All beer/lager and cider sales combined with an ABV between 3-6%, 2018



Source: Public Health England analysis of Kantar Worldpanel data, 2018.

Wine sales

The ABV of wine products is not 100% complete. Data is missing for 3.1% of wine sales. The usable sample is still considerable at 847,910,733 litres of product sold. The missing cases are shown as not available (N/A) in Table 4.

The greater proportion (65.4%) of wine sales have an ABV of 12% and above, with 35.6% of sales having a strength of 13% ABV and above.

As mentioned, red and white wine have a higher average ABV than rosé and sparkling wine, accounting for the majority of wine sales (77.0%; Table 5).

Table 4: All wine sales by ABV (2018)

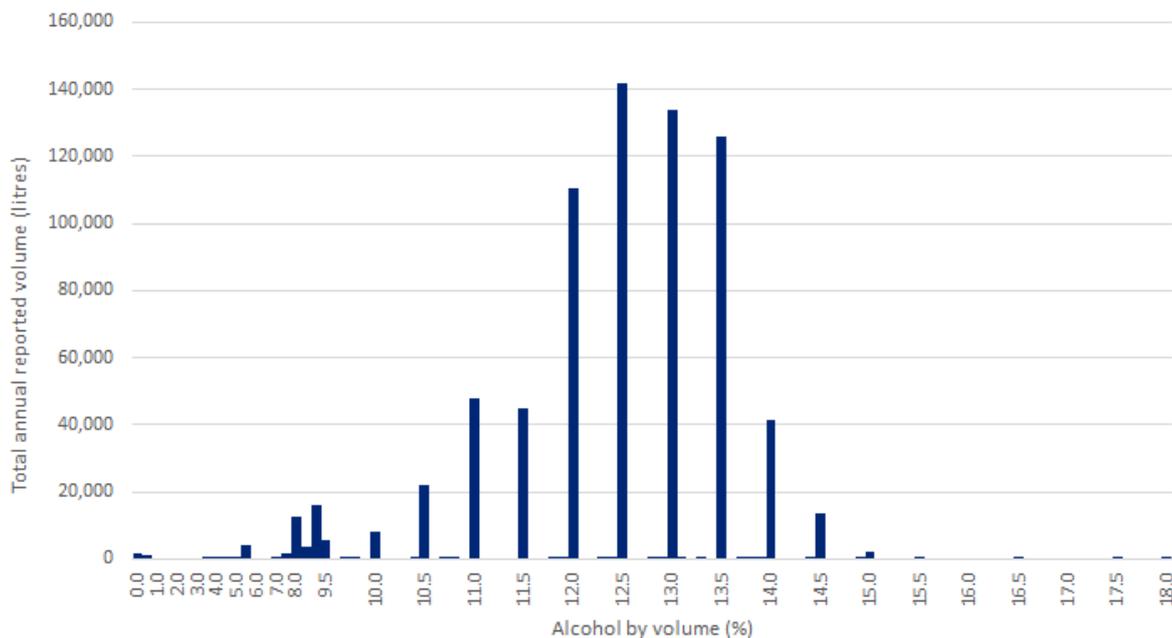
ABV	Total annual reported volume (litres)	Proportion (%)
Under 10%	94,617,240	10.8
10%	38,637,137	4.4
11%	142,833,696	16.3
12%	260,790,804	29.8
13%	255,215,342	29.2
14% plus	55,816,514	6.4
Total	847,910,733	100
N/A	27,055,109	
Total (inc. N/A)	874,966,842	

Table 5: All wine sales by type (2018)

Wine type	Total annual reported volume (litres)	Proportion (%)
Red	341,950,920	39.1
White	331,870,712	37.9
Sparkling	118,880,454	13.6
Rosé	82,264,756	9.4
Total	874,966,842	100.0

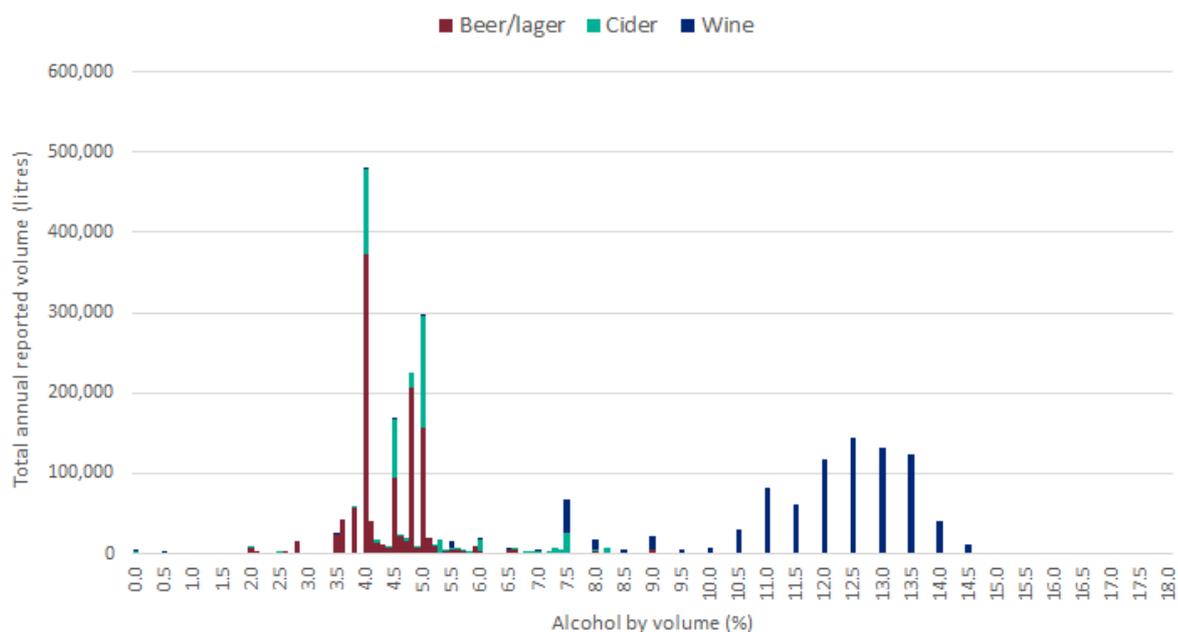
Analysis of beer, cider and wine sales to identify most commonly purchased products as a precursor to a review of typical ABV levels

Figure 5. All wine sales by ABV, 2018



Source: Public Health England analysis of Kantar Worldpanel data, 2018.

Figure 6. All beer/lager, cider and wine sales by ABV, 2018



Source: Public Health England analysis of Kantar Worldpanel data, 2018.

Risks

The biggest risk from making changes to the alcohol module questions in the HSE is the disruption to the time series. Users at the alcohol workshop acknowledged this as a concern but felt relevance and currency were higher priorities. As a result, they were willing to trade off occasional series breaks for more robust and relevant data. It would be useful to consult a wider range of users about this issue before making any changes.

A secondary risk from changing alcohol-related questions in the HSE is the potential for misalignment of data between England, Scotland, and Wales. Currently, the same questions are used across the population health surveys in all 3 countries.

Survey leads in Scotland and Wales have been informally consulted about the potential for changes to the English questions. Scottish people said that they were keen to be involved in the process and recognised that the questions and product list could benefit from being updated.

However, they were concerned about any significant discontinuity in the time series in light of the recent introduction of Minimum Unit Pricing (MUP) in Scotland and the need to evaluate its impact.

Wales also agreed that the current questions could benefit from being updated and shortened. In Wales, the usual drinking data is at the centre of the policy, with less interest in the heaviest drinking day data: just as in England.

The content of the Welsh National Survey (WNS) is updated each year. This meant that, compared to Scotland, there were fewer concerns about changing the questions.

Conclusions

The product list used in HSE should be updated to reflect current drinking habits where beer/lager, wine, cider and spirits account for 97.2% of all alcohol purchased

Beer/lager and cider

- beer/lager and cider account for 58.1% of all alcohol purchased. The typical ABV of products purchased is 4.6%. This is similar to the 4.5% assumed in the current conversion table for bottled/cans of beer/lager and cider
- under the previous definition of 'strong' products (6% and above) only 2.6% of all beer/lager purchases and 14.3% of all cider purchases were included. Widening this to include products 5% and above⁵ would include 20.6% of all beer/lager purchases and 51.1% of all cider purchases
- the different average ABVs and range of products with an ABV over 5% also suggests that beer/lager and cider should be separated in HSE questions and in any revised conversion table

Wine

- the average strength of all wine purchased is 11.9%, if we exclude rosé and sparkling wine this increases to 12.5%. This is not significantly different from the 12% assumption discussed at the original workshop (which was rounded down from 12.5%)

⁵ This excludes popular brands such as Stella Artois, Budweiser, Becks, and Carlsberg Export with an ABV of 4.8%, which are commonly considered stronger lagers.