

EXECUTIVE SUMMARY: Scoping and feasibility study to develop and apply a methodology for retrospective adjustment of alcohol consumption data

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Part 1: Mapping of key changes in alcohol strength, standard measures, glass size and shape, 1990-2012

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Part 2: Adjustment factors: development and application to survey data, 1990-2005

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Executive Summary

Background

Harmful alcohol use is a serious public health issue (BMA 2008, Robinson & Lader 2009). To inform policy development in this area, an accurate understanding is needed of changes in real levels of alcohol consumption at population level over time. Changes in glass size and alcohol strength have complicated this understanding. For example, there has been a trend over the past 20-30 years towards larger measures, particularly of wine, being served in licensed premises, and towards stronger ABV (alcohol by volume) for certain categories of drink, such as lager, beer, cider and wine (NHS Information Centre 2010). Changes in glass shape (Attwood et al 2012) over recent years may also affect consumption estimates. These changes have made it difficult meaningfully to compare self-report consumption data over the same period, as the underlying assumptions and understanding regarding a standard drink or serving have not been consistent. Consistency is important, because assessing the effectiveness of population policy measures is only possible if data from different survey years are genuinely comparable. There is a need for new research to develop and apply a robust methodology for retrospective adjustment of official trend data on alcohol consumption, to take account of changes in glass size and shape and alcohol strength over time.

Aims and methods

A scoping and feasibility study was commissioned by the Department of Health through the Public Health Research Consortium (<u>http://phrc.lshtm.ac.uk/</u>) to research, develop and apply a methodology that allows for retrospective adjustment of alcohol consumption trend data in England, to take account of changes over time in glass sizes and shape and alcohol strength.

The objectives of the study were to:

- a) Review available research and other evidence to map key changes in alcohol strength, standard measures, glass size and shape since 1990;
- b) Interview key stakeholders to establish relevant assumptions and to inform the mapping exercise;
- c) Develop a robust formula / formulae for use in retrospective adjustment of official data;
- d) Apply the formula /formulae to official data on a selective basis; and
- e) Report the results and discuss implications for a full-scale study.

Part 1 of the report describes the methods and findings from the mapping element of the study (objectives a and b), while Part 2 describes the development of the methodology for retrospective adjustments of existing survey data, and their implications for estimates at two data points, 1995 and 2000, and further considers the implications for a full-scale study (objectives c to e).

Findings

This report has identified key changes in alcohol strength, standard measures, glass size and shape since 1990, focusing primarily on changes relating to beer, wine and cider. It has then used this evidence to estimate the actual alcoholic strength of beer (including shandy and cider) and wine between 1990 and 2005, and – in the case of wine – changes in the average glass size, and to examine the implications for retrospective adjustment of alcohol consumption survey data over the period.

Overview of key changes

Strength

With beer, there has been a trend towards greater variability in strength (both lower and higher) in response to duty changes (eg. reduction for <2.8% ABV beers) and perceived consumer demand (for both stronger and weaker products). Available data suggest that the average strength of beer, for both on- and off- trade combined, has increased fairly steadily by 4% over the period 1994 to 2011, from 4.05 to 4.21% ABV. For the time period 1994 to 2005, the average strength increased by 3%, from 4.05 to 4.17% ABV, with a peak strength of 4.22% ABV in 2004. Average strength has remained fairly steady between 2004 and 2011, fluctuating between 4.17% and 4.22%.

For wine, there has been an overall trend towards increasing strength from 1997 to 2007, attributed to the growing popularity and market share of stronger New World wines over weaker European wines. Since 2007, new lower strength wines have been developed, in response both to perceived consumer demand and duty rates favouring lower % ABV. Between 1990 and 2005, the average strength of wine increased by 12%, from 11.15 to 12.48% ABV. Over the whole period, there was a 13% increase from 11.15 to 12.58% ABV, with the average strength of wine plateauing at 12.58% ABV from 2007 onwards.

The cider category is very varied, with a broad range of strengths amongst its most popular brands. Data are limited, but overall a mixed picture emerges over the time period, with some products reduced in strength, sometimes in response to duty changes, and other stronger products launched in the 1990s.

Measure sizes

In 1995, permitted measure sizes for wine served by the glass in licensed premises changed to 125ml, 175ml, and multiples thereof, and metric measure sizes of 25ml and 35ml were introduced for spirits served in licensed premises, with an additional measure size of 70ml introduced in 2001. Beer measure sizes were largely unchanged over the period (1/3 pint, ½ pint and multiples of ½ pint), although a 2/3 pint measure was introduced in 2011. In 2010, legislation was introduced to ensure that the smallest measures for all categories must be available to customers and that customers are made aware of their availability.

Vessel size

The introduction of larger and multiple measures might be expected to have increased the average serving size for spirits and wine. Precise data on sales for particular beverage categories broken down by glass size could not be obtained. However, information from the trade press and market research reports suggest a trend for licensed premises to offer larger servings of wine by the glass from the mid-1990s onwards. Other trends in glass size include the increasing popularity of double spirit measures, large glasses for cocktails, and the increasing use of beer and cocktail pitchers.

The data on changes in vessel size and type for home consumption over the time period are limited and describe a trend for larger bottles of beer sold for home consumption. Available market research data for glassware sold for use in the home are not broken down by shape or size of glasses.

Application to survey data

These estimates have been used to calculate conversion factors that can applied to survey data, specifically to the General Household Survey, the source of National Statistics about alcohol consumption in England during this time. In the case of wine, and of beer until 1997, these are presented as a single multiplier of the original estimates, given that the latter calculated a pint of beer or a glass of wine as equivalent to one unit of alcohol. The revised estimates of the alcohol content of beer from 1998 onwards are based on the 2006 ONS revised methodology currently used to calculate alcohol consumption, and are consequently more complex, including different assumptions of alcohol strength depending on the type of beer drunk, and also incorporating calculations of bottle size where applicable based on brand. Unlike the ONS original and revised methodologies, the conversion factors used for beer and wine are rounded to the nearest decimal place.

The main outcomes of the revised calculations are:

- higher estimates of alcohol consumption from 1990;
- estimates of alcohol consumption in the form of beer, cider and shandy that exceed the original estimates by between 11% and 23%;
- estimates of alcohol consumption in the form of wine that exceed the original estimates by 40% in 1990, increasing to an additional 110% in 2005;
- estimates of average weekly consumption of all drinks exceeding the original estimates by 13% in 1990, increasing to an additional 40% in 2005.
- a greater impact on women than men.

Recommendations

This report has focused on mean alcohol consumption in an average week with a limited exploration of the impact of the revised method on the proportions of adults drinking above the thresholds of 21 units for men and 14 units for women. It can be extended to assess the prevalence of drinking at different levels among different population groups, particularly more risky drinking (50 units for men, 35 units for women).

In using survey data to measure and assess the trends in alcohol consumption, there is a tension between consistency over time and reflecting a changing world. This is a feasibility study, and there is a need to define the ways in which these revisions should be used, given that they present a picture of alcohol consumption that is at variance with published national statistics.

It has also been a retrospective exercise and is dependent on the survey data that has already been collected. However, it raises questions about how alcohol consumption should be calculated from survey data in future. This would involve several changes in approach:

a) The Department of Health should consider a programme of accessing market data to provide detailed and specific evidence on changes in alcohol strength, glass size and other aspects of glassware over time, and on the breakdown of alcohol sales by these variables. This may involve buying data from market intelligence agencies such as Mintel. In addition, there is scope for collaboration with the British Beer and Pub Association, who currently gather a considerable body of data about the alcohol market. This study has relied on the BBPA's estimates of the average ABV of beer and wine, and it would be useful if similar analyses could be commissioned in future, using a methodology that was both reliable and transparent.

- b) Estimates of alcohol consumption based on large-scale government-sponsored surveys are well-established. The methodology used to convert drinks into units of alcohol has been reviewed once, in 2006. There needs to be critical consideration of how often such a review should take place, bearing in mind the tensions between accuracy and comparability over time.
- c) Similarly the methodology and questions used to measure alcohol consumption on government surveys should be reviewed to ensure that they reflect the current drinks market as understood by consumers. This includes consideration of different methodologies (e.g. yesterday recall, diaries), and additional information (e.g. whether alcohol was consumed on licensed premises or elsewhere) that could improve data quality. However, this review also needs to take into account respondent burden, backward comparability and available resources.
- d) There is a scarcity of evidence about the size of home-poured drinks, particularly wine and spirits. Any review of survey methodology should take this into account, if necessary by commissioning new research.
- e) This review did not consider drinks other than beer and wine, due to a lack of evidence. It may be possible in future to extend a similar review to spirits and alcopops (RTDs).

This methodology could now be applied and tested in other existing data sets. The General Household Survey measures of weekly drinking were used in this report because they were collected systematically between 1990 and 2005. Other surveys may measure different things (for example daily consumption based on the highest drinking day in the past seven days). The applicability of the methodology may also need to be adapted where types and sizes of drinks are defined differently.