We wish to submit evidence on three areas. Firstly, on the effects of alcohol pricing; secondly, on our report to the Scottish Government published in April 2010 which provides evidence on the effectiveness of minimum pricing based on results from the Scottish adaptation of the Sheffield Alcohol Policy Model; thirdly, on recent published evidence on minimum pricing.

**The effects of alcohol pricing**

The School of Health and Related Research (ScHARR) at the University of Sheffield was commissioned by the UK Department of Health to produce a systematic review of the evidence on effects of pricing and promotion on alcohol consumption and alcohol-related harm. This report was published in September 2008. We focus here on the findings for the relationship between 1) tax or price and alcohol consumption and 2) tax or price and alcohol-related harm.

**Tax or price and alcohol consumption**

At the time of ScHARR’s review, there had been two major reviews of the evidence on the effects of pricing and taxation on alcohol consumption. These reviews covered 132 and 91 primary studies respectively. ScHARR also identified a further 15 relevant primary studies.

The review found strong and consistent evidence to suggest that price increases (including those resulting from increased taxation) have a significant effect in reducing demand for alcohol. Both major reviews included meta-analyses which provide an estimate of the average impact of price increases across all studies. These average effects were that a 10% price increase would lead to a 5.0% or 4.4% reduction in total consumption. The evidence within ScHARR’s review was derived from studies within four different countries, including the UK, and a range of study designs and methodologies were used increasing confidence in the robustness of the results.

The review also addressed price responses within population groups of interest, namely young drinkers, binge drinkers, harmful drinkers and low income groups. Reviewed studies showed that increases in the price of alcohol reduce the alcohol consumption of young people, with a greater impact on more frequent and heavier drinkers than on less frequent and

---

lighter drinkers. Price was also seen to influence binge drinking with a large study in the USA finding a 10% increase in price would decrease the number of binge drinking episodes\(^4\) by 8%. More generally, there was evidence to suggest that young drinkers, binge drinkers and harmful drinkers tend to choose the cheaper drinks which would be subject to increases in price under a minimum unit pricing policy. No specific evidence was found on low income groups.

At the time of the review, only one low quality study of the effectiveness of minimum pricing was identified. This suggested minimum pricing may be effective as a targeted public health policy in reducing consumption of cheap drinks.

**Tax or price and alcohol-related harm**

ScHARR’s review identified 46 studies assessing the impact of tax or price on alcohol-related harm. Although there are limitations within the evidence base, the studies consistently suggest evidence for an association between increases in taxation or pricing of alcohol and reductions in alcohol-related harm. This is true for both acute harms (where harm immediately following drinking) and chronic harms (where harm is often the result of long-term drinking behaviour).

A major review and meta-analysis of the effects of alcohol tax and pricing policies on alcohol-related harm covering 50 studies has since been published\(^5\). This found that, on average, if alcohol taxes were doubled, alcohol-related diseases and injuries would fall by 3.5%, violence would fall by 2.2%, suicide would fall by 4.8%, traffic crash fatalities would fall by 11%, sexually transmitted diseases would fall by 5.5% and crime would fall by 1.4%.

**Evidence on minimum pricing from the Scottish adaptation of the Sheffield Alcohol Policy Model**

In April 2010, results were published of an independent academic study carried out by ScHARR and commissioned by the Scottish Government to examine the potential effects of different minimum pricing levels on patterns of alcohol consumption and the resulting impact on alcohol-related health, crime and workplace harms in Scotland\(^6\). This study used new data to update results published in an earlier report for the Scottish Government. A further update using new data and improved methodologies is currently being undertaken and results will be published by the Scottish Government in due course. Results presented here are taken from the April 2010 report.

ScHARR analysed over 20 separate policy scenarios including setting a range of minimum prices per unit of alcohol, a total ban on promotional

\(^4\) Defined as consuming 5+ standard drinks on a single occasion (approximately 8+ UK units)


discounts in off-trade outlets and combinations of these two strategies. The analysis examined policy effects for moderate, hazardous and harmful drinkers\(^7\), taking account of both on-trade (e.g. pubs, clubs and restaurants) and off-trade (e.g. supermarkets and off-licenses) purchasing.

**Methodology**

Policies were analysed using modelling techniques applied to a range of data sources. To estimate the effects of pricing policies on alcohol consumption we use Scottish data from large population surveys including the Scottish Health Survey and the Expenditure and Food Survey. To estimate effects of changes in alcohol consumption on alcohol-related harm, we use the best-available evidence detailing how risk of harm increases with higher levels of consumption and what proportion of each harm is attributable to alcohol consumption. This is combined with Scottish administrative data on rates of crime, alcohol-attributable diseases, hospitalisations and workplace harms to produce estimates of change in the rates of harms. As well as checking our findings are consistent with international evidence, we have ensured that, wherever possible, the data underpinning the model are both recent and Scotland-based. Full details of the methodology can be found in the project report\(^6\).

ScHARR’s work on modelling alcohol policies has been extensively peer-reviewed and published in the leading medical journal, *The Lancet*\(^8\) and is recognised as a leading example of using modelling to appraise health policies.

**Results**

The estimated reductions in total alcohol consumption for different minimum price policies are shown in table 1. Since ScHARR’s report was published, new policies banning quantity discount promotions in off-licenses have been introduced via the *Alcohol etc. (Scotland) Act 2011*. Therefore, table 1 also shows estimated consumption reductions when policies are enacted in conjunction with a total ban on price promotions in off-licenses. Although not identical to the enacted policies, these results can be seen as indicative of the combined effect of minimum pricing and large restrictions on off-license price promotions. Table 1 shows that minimum price policies are estimated to lead to substantial reductions in alcohol consumption both individually and in conjunctions with off-license promotion bans. Policy effects from minimum pricing increase steeply as the minimum unit price increases above 40p, but relatively little effect is seen at levels below35p.

\(^7\) Moderate drinkers are men/women who consume less than 21/14 units per week, hazardous drinkers are men/women consuming between 21/14 and 50/35 units per week, harmful drinkers are men/women consuming more than 50/35 units per week.

<table>
<thead>
<tr>
<th>Minimum unit price</th>
<th>Reduction in total alcohol consumption (%)</th>
<th>Reduction in total alcohol consumption when enacted with a total ban on off-trade promotions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25p</td>
<td>0.1</td>
<td>3.2</td>
</tr>
<tr>
<td>30p</td>
<td>0.3</td>
<td>3.4</td>
</tr>
<tr>
<td>35p</td>
<td>1.0</td>
<td>4.0</td>
</tr>
<tr>
<td>40p</td>
<td>2.3</td>
<td>5.1</td>
</tr>
<tr>
<td>45p</td>
<td>4.3</td>
<td>6.7</td>
</tr>
<tr>
<td>50p</td>
<td>6.7</td>
<td>8.7</td>
</tr>
<tr>
<td>55p</td>
<td>9.5</td>
<td>11.2</td>
</tr>
<tr>
<td>60p</td>
<td>12.3</td>
<td>13.7</td>
</tr>
<tr>
<td>65p</td>
<td>15.3</td>
<td>16.5</td>
</tr>
<tr>
<td>70p</td>
<td>18.4</td>
<td>19.5</td>
</tr>
</tbody>
</table>

We do not and have not recommended any particular level of minimum unit price. However, by way of example, a 50p minimum unit price (not including an off-license promotions ban) would lead to the following reductions in alcohol-related harm:

- After 10 years:
  - 352 fewer deaths and 6,500 fewer hospital admissions per year
- After 1 year:
  - 600 fewer violent crimes and 4,000 fewer total crimes per year
  - 36,900 fewer days absent from work and 1,700 fewer people unemployed

Over 10 years, these reductions in alcohol-related harm would lead to cost savings of:

- £132m in direct health costs and £583m in financial values of quality-adjusted life years (QALY) gained through mortality and morbidity savings;
- £29m in direct crime costs and £21m in financial value of QALY gained through reduced experience of crime;
- £338m in work-related costs;
- Total cost savings of £1.1bn

Results also suggest minimum pricing is particularly effective in reducing the consumption and harm experienced by harmful drinker relative to other drinkers. For a 50p minimum unit price, consumption would reduce by 11.4% amongst harmful drinkers, compared to 3.3% amongst moderate drinkers. This is reflected in changes in spending on alcohol. Under the same policy, harmful drinkers’ annual spending is estimated to increase by £138 on average compared to an average of £12 for moderate drinkers.

Under minimum pricing policies, both on-trade and off-trade retailers would see increased revenue from alcohol sales as spending by all consumption groups would increase (e.g. total spending would increase be £123.4m under
a 50p minimum unit price). Revenue to the exchequer would fall only slightly as lower duty receipts from reduced sales volumes are largely cancelled out by increased VAT receipts from higher prices. Under a 50p minimum unit price the total reduction in alcohol duty and VAT would be £16.5m.

**Further recent evidence on minimum pricing**

We wish to briefly comment on recent evidence from a Canadian study of the effects of minimum pricing on alcohol consumption. It has often been argued that the evidence in support of minimum pricing is weak as it has never been attempted by any jurisdiction. However, Canada operates a minimum pricing policy within its partial government alcohol monopoly. Professor Tim Stockwell of the University of Victoria, Canada has recently presented evidence on the impact of twenty years of periodic changes in minimum prices within this system. Final figures are unavailable at the time of submission; however, results clearly show that significant falls in alcohol consumption occurred when minimum prices were increased. These findings are in line with previous evidence on the effects of alcohol pricing policies and support the results of SchARR’s modelling evidence in suggesting that minimum pricing is an effective means of controlling alcohol consumption.

Two recent reports have addressed whether minimum pricing impacts disproportionately on low income households. Using only Scottish data on off-trade alcohol spending from the Expenditure and Food Survey (EFS), Ludbrook found the quantity of alcohol purchased for below 50p per unit generally increases with income. In contrast, using Kantar World Panel data on off-trade alcohol spending, the Institute for Fiscal Studies (IFS) found that lower income groups bought the largest quantities of alcohol below 45p per unit – the reverse of Ludbrook’s finding. The reason for this inconsistently is unclear and may lie in the quality of the data and analyses. For example, the EFS assumes a single alcohol content for each beverage type (e.g. off-trade beer, on-trade spirits), whereas the Kantar data contains actual alcohol content for most purchases. However, income data is more rigorously collected in the EFS and allows for analysts to take account of household size; a key factor when examining discretionary spending by low income households. The IFS also looked at UK data, whilst Ludbrook only analysed Scottish data. Overall, we conclude the available evidence does not yet allow robust statements to be made regarding the impact of minimum pricing on low income groups.

Dr John Holmes
Research Fellow
Section of Public Health, SchARR
University of Sheffield
7 December 2011

---