

## Alcohol pricing and purchasing among heavy drinkers in Edinburgh and Glasgow

July 2015

### Key findings

- Drinkers in this study consumed an average (median) of 185 units per week, and paid an average of 40 pence per unit of alcohol. Off-sales accounted for 95% of purchases. 85% of off-sales purchases were less than 50p per unit.
- Cheap alcohol – in particular vodka and white cider – accounted for most of the units consumed by heavy drinkers in this study.
- As alcohol became less affordable, heavy drinkers 'traded down' to cheap vodka and white cider in order to maintain consumption levels.
- The key factors influencing harm were amount of alcohol consumed, deprivation and smoking. Among women, the 'Glasgow effect' was visible, with those living in Glasgow experiencing greater health harms despite comparable consumption.
- Very heavy drinkers would be significantly affected by MUP, but the precise effects on consumption cannot be predicted from this study. Fewer purchases may be accompanied by shifts in expenditure, pooling resources and other strategies to mitigate the effects.

### Research team

Professor Jonathan Chick<sup>1</sup>, Dr Jan Gill<sup>1</sup> (Edinburgh (Napier University)), Robert Rush<sup>1</sup>, Professor Barbara McPake<sup>2</sup>, Fiona O'May<sup>2</sup>, Heather Black<sup>1</sup>, Cheryl Rees<sup>2</sup>, Jane Doogan<sup>2</sup>, Christine Galloway<sup>2</sup>, Lucie Michalova<sup>1</sup>

*1 Edinburgh Napier University, 2 Queen Margaret University*

### Background and Aims

In Scotland adult sales of pure alcohol are one fifth higher than in England and Wales, with this difference being ascribed particularly to sales of cheaper spirits such as vodka. In 2011 alcohol-related death rates amongst Scottish men were 1.8 times those of their counterparts in England, for women the ratio was 1.75 (Beeston et al., 2013). In 2006 alcohol-related death rates amongst Scottish women actually exceeded those of men in England and Wales (Beeston et al., 2012).

The Scottish Government has responded to these trends through a policy framework set out in Changing Scotland's Relationship with Alcohol (Scottish Government, 2008). A key policy initiative has been the proposed introduction of a minimum unit price (MUP) of 50p per unit under the 2012 Alcohol (Minimum Pricing) Act. Currently MUP is subject to a legal challenge and its date of implementation in Scotland remains uncertain.

The purpose of this study was to describe the purchasing patterns and consumption behaviour of heavy-drinking individuals who had been harmed by their alcohol intake. As some of the heaviest drinkers, this is the group likely to be most acutely impacted by the introduction of MUP (Holmes et al., 2014; Sheron et al., 2014). The consumption practices of very heavy drinkers are normally poorly described by traditional population surveys. Therefore, in the Scottish policy context especially, targeted research was required to better inform discussions of the potential impact of MUP on the heaviest consumers of alcohol.

## Methods

Patients at NHS settings in Edinburgh and Glasgow were approached by clinicians for permission to be interviewed on four occasions (approximately six months apart) over a period of 2-3 years. Both in- and out-patients were recruited at hospital clinics across each city. At each interview, participants provided demographic data and were asked to recall their most recent, or typical, week of drinking (type, quantity consumed, location and price paid). In addition, participants completed a questionnaire which recorded alcohol related problems in four areas (physical health, mental health, social problems, and judicial problems). Finally, after completion of the third survey, 20 participants (10 in each city) took part in one-to-one interviews. These explored purchasing behaviours and attitudes to the value, and perceived personal impact, of recent and proposed policies.

At the first follow-up, 227 participants were re-interviewed, 165 at the second follow-up and 145 remained to complete the final interview. During the three years of the study, 105 participants (16.4%) died. For women in this group the mean age at death was 49.1 years, for the men 51.8 years. Some participants withdrew from the study due to a very understandable reluctance to revisit details about their drinking history during a time when they were striving to maintain abstinence or controlled drinking.

Data from a 2008-9 pilot study with patients at Lothian hospitals, Edinburgh was used for comparison (Black et al., 2011).

## Findings

The baseline sample had a mean age of 45.6 years. 72% were male, 28% female. Levels of alcohol consumption among participants were very high, with a median weekly consumption of 185 units. Weekly consumption among men (median=196 units) was significantly higher than among women (median=158 units).

Participants generally bought alcohol cheaply, paying a median price of 40p per unit. 95% of all purchases were made in off-licences and the median weekly expenditure was £70. The three most popular drinks were vodka (27% of all units purchased), white cider (24%), and beer (20%). Vodka accounted for the greatest proportion of alcohol purchased by women (41%); for men this drink was white cider (26%). Whisky, a spirit drink traditionally associated with Scotland, accounted for only 5% of purchases.

Off-sales accounted for 95% of purchases, of which 85% of units were purchased at a price of less than 50p per unit. 34% of all units were purchased from supermarkets, 49% from corner shops, 9% from off-licences and 3% other outlets e.g. petrol stations.

Comparison with pilot data collected in 2008/09 showed that a fall in the affordability of alcohol had been off-set by this type of heavy drinkers switching to cheaper products. White cider was an important buffer: its cheap unit price (average 17p per unit) allowed it to be used as a fallback drink when finances were

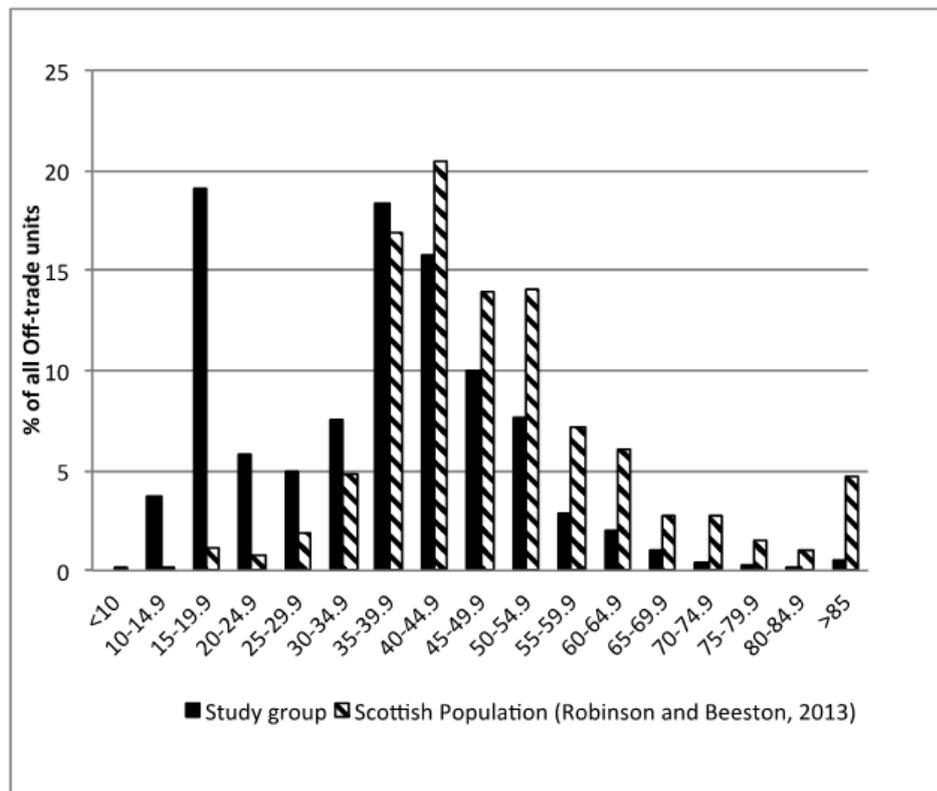
restricted. It is already recognised that very heavy drinkers tend to buy alcohol cheaply; our findings demonstrate that, as long as very cheap alcohol is available, falling affordability is cushioned by trading down.

Among the general population of Scotland in 2012-13, most alcohol purchased in the off-trade was sold at 35-44.9p per unit (Beeston et al., 2013). In contrast, our participants purchased the largest proportions of their drinks within the 15-19.9p and 35-39.9p per unit price bands.

Despite the economic downturn and recent changes to the welfare system, usually resulting in reduced income, most participants were still able to maintain their level of consumption. This was especially the case for those drinking cheaper products such as white cider and vodka. However, consequences of increased expenditure on alcohol included a reduction in food purchasing and heating, and falling into – or increasing – debt. Some participants coped by pooling or sharing resources, either money or alcohol, with other drinkers. There was little evidence of substituting other substances for alcohol or consumption of illicit alcohol in our sample.

Men drank significantly more than women in deprivation quintiles 1, 2 and 4, but not in quintiles 3 and 5 (5 being least deprived). Among women, the association between alcohol consumption and harm was influenced by two key factors: increased deprivation and being recruited in Glasgow rather than Edinburgh. In this, the study findings reflected a phenomenon sometimes referred to as the ‘Glasgow effect’, in which health outcomes across a wide range of measures are worse for people living in Glasgow than elsewhere (Gray and Leyland, 2008).

*Price distribution of drinks purchased as off-sales by study group (2012) compared to Robinson and Beeston (2013):*



In the 639 patients, 161 (25%) reported consuming white cider in their most recent or ‘typical’ week of drinking. Of these, 72 participants drank white cider exclusively. White cider drinkers consumed signifi-

cantly more alcohol (median=249 units) than the no white cider group (median=174 units). Women were half as likely as men to be a white cider drinker. Those in the least deprived group were one-fifth as likely to drink white cider as those in the most deprived group. While men consumed significantly more alcohol than women overall, among white cider drinkers men and women consumed similar numbers of units.

All white cider was purchased exclusively at off-sales outlets: 77% of white cider units were purchased at independent licenced grocers, 13% from supermarkets and 10% from other off-licences (drinks retailers, garages and newsagents). When asked to state their reasons for purchasing white cider, the majority (83%) reported that it was chosen because of its cheapness. One participant advised that it was cheaper than heroin while others alluded to its role as a 'buffer' that was used as a fallback drink when funds were low.

No evidence was identified confirming anecdotal reports in the literature suggesting an enhanced health harm associated with white cider consumption in particular. Increased health risks are more likely to be associated with the high levels of ethanol consumption among white cider drinkers (which were significantly higher than non-white cider drinkers). The health risk of the alcohol intake reported by participants (equivalent to 4-5 times the UK definition of harmful consumption) is likely to be compounded by smoking (70% of participants smoked).

Interviews with participants revealed a limited understanding of the predicted effects of MUP, but also a concern that removal of cheap alcohol would compromise the budgets of addicted drinkers. The majority of participants lived from day to day, sometimes from hour to hour, and were generally not able to plan ahead, let alone take account of legislation that might not be implemented for years, if at all. Their attitude was that they would deal with any issues if and when MUP (to them merely a vague and obscure concept) was in place. However, for the majority of people we interviewed, who have a high frequency and volume of purchasing, we anticipate that the impact of MUP could be immediate, particularly for the white cider and cheap vodka drinkers. Systems would need to be in place to address possible short-term consequences within this population, such as medical complications associated with alcohol-withdrawal.

Our participants tended to believe that any existing or proposed alcohol policy would not help them reduce their consumption, but that the introduction of, for example, MUP, might reduce the likelihood of younger people developing the same drinking patterns and harms that they had suffered.

## Implications

Our study findings have two important implications for alcohol policy in the UK.

1: *Our data adds some weight to the public health argument for minimum unit pricing on two counts:*

- Currently, alcohol sold at less than 50p per unit makes a significant contribution to the consumption of heavy drinkers across the deprivation quintiles
- Minimum unit pricing would remove the trading down option, particularly for cheap cider sales

In this population there is currently little theft or use of illicit alcohol and our participants tended not see it as a likely consequence of MUP. However, it cannot be ruled out.

2: *Although this study was not designed to examine access to, or effectiveness of, treatment for alcohol problems the high death rate draws attention to this as a policy issue.*

## Conclusion

Very heavy drinkers rely to a great extent on the availability of very cheap alcohol to maintain levels of consumption. Furthermore, this study confirms that, as long as very cheap alcohol is available, falling affordability in general is cushioned by trading down to white cider and low-price vodka. The introduction of a minimum unit price for alcohol would raise the floor below which price-based substitution could occur. In this sense, it would undoubtedly target the heaviest drinkers in particular. However, the precise effects on purchasing remain unclear. Our participants used a variety of methods to maintain consumption in the face of recent legislative developments, and so any reduction in consumption caused by MUP is likely to be accompanied by shifts in expenditure, resource-pooling or other methods designed to mitigate its effects. MUP, then, would immediately remove access to products that are key to maintaining high levels of consumption among the heaviest drinkers in the population; however, policymakers will need to be sensitive to the unexpected or potentially risky consequences that may arise from the policy, at least in the short term.

## Further Information

Contact the report authors Prof Jonathan Chick and Dr Jan Gill

## Acknowledgements

This study was also supported by a grant from the Chief Scientist Office (Scotland) (CZH/4/645); NHS Health Scotland; NHS Lothian Foundation Trust and in kind by the Scottish Mental Health Research Network.

## References

Beeston, C., Reid, G., Robinson, M., Craig, N., McCartney, G., Graham, L. and Grant, I. (on behalf of the MESAS project team)., 2013. *Monitoring Third Annual Report*. Edinburgh: NHS Health Scotland.

Beeston, C., McAuley, A., Robinson, M., Craig, N., and Graham, L. (on behalf of the MESAS project team)., 2012. *Monitoring and Evaluating Scotland's Alcohol Strategy. 2nd Annual Report*. Edinburgh: NHS Health Scotland

Black, H., Gill, J. and Chick, J. (2011) The price of a drink: levels of consumption and price paid per unit of alcohol by Edinburgh's ill drinkers with a comparison to wider alcohol sales in Scotland. *Addiction* 106, 729-36.

Gray, L., and Leyland, AH. (2009). Is the "Glasgow Effect" of cigarette smoking explained by socio-economic status: a multilevel analysis. *BMC Public Health* 9:245.

Holmes, J., Meng, Y., Meier, PS., Brennan, A., Angus, C., Campbell-Burton, A., Guo, Y., Hill-McManus and Purshouse RC. (2014). Effects of minimum unit pricing for alcohol on different income and socioeconomic groups: a modelling study. *The Lancet*, Feb 10.

Sheron, N., Chilcott, F., Matthews, L., Challoner, B. and Thomas, M. (2014). Impact of minimum unit price

per unit of alcohol on patients with liver disease in the UK. *Clinical Medicine* 14.4, 1-7.

Scottish Government., 2009. Changing Scotland's relationship with alcohol: A Framework for Action. Edinburgh: Scottish Government. [viewed 22 September 2014]. Available from: <http://www.gov.scot/Publications/2009/03/04144703/0>

[Download the Final Report](#)

 **Alcohol Research UK** works to reduce levels of alcohol-related harm by ensuring that policy and practice can always be developed on the basis of research-based evidence.

 We are a lead funder of high quality research into the causes, impact and prevention of alcohol-related harm and are the only organisation exclusively dedicated to building an evidence base in this area.

 Read more reports at [www.alcoholresearchuk.org](http://www.alcoholresearchuk.org)

 Alcohol Research UK, 83 Victoria Street, London SW1H 0HW Tel: 020 3585 4155 Registered charity 1140287

