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Title: Minimum Unit Pricing in Scotland 32 months on: evidence demonstrates a significant reduction in alcohol related deaths

Authors: Tamar Avades[1], Ashwin Dhanda[1,2]

[1]South West Liver Unit, University Hospitals Plymouth NHS Trust, Plymouth, UK
[2]Faculty of Health, University of Plymouth, Plymouth, UK

Corresponding author
Dr Ashwin Dhanda, FRCP PhD
John Bull Building
16 Research Way
Plymouth PL6 8BU
Tel: 01752 432723
Email: ashwin.dhanda@plymouth.ac.uk

ORCID IDs
Tamar Avades: 0009-0000-9701-385X
Ashwin Dhanda: 0000-0002-0523-0193

Competing interests
Neither author has any competing interest to declare.

Commentary on: Wyper GM, Mackay DF, Fraser C, *et al*. Evaluating the impact of alcohol minimum unit pricing on deaths and hospitalisations in Scotland: a controlled interrupted time series study. *The Lancet*, 2023;401(10385):1361-1370.

Implications for practice and research:

- Data will inform the decision of the Scottish Parliament whether to keep the minimum unit pricing (MUP) policy, which expires on 30th April 2024
- Further study is needed exploring the enduring effects of MUP on chronic alcohol conditions, including alcohol-related cancer deaths

Context

In 2021, the rate of alcohol-related deaths in the UK increased by 7.4% from 2020 (14.8/100,000), with the highest rate (22.4/100,000) in Scotland.[1] There are inequalities in those affected by alcohol with more admissions and deaths in males and people from lower socioeconomic groups.

MUP is a public health intervention intended to reduce alcohol consumption in people at highest risk of alcohol-related ham. Scotland introduced MUP at £0.50/unit of alcohol on 1st May 2018. Those drinking the heaviest often consume stronger and cheaper alcohol, providing a targeted intervention.[2] Three years following the implementation, there was a 3% reduction in alcohol sales in Scotland.[3]

Methods

Wyper et al[4] evaluated whether MUP effected alcohol-related hospitalisations and deaths in Scotland. The study used a controlled interrupted time series with routinely collected data from the National Health Service Scotland on individuals over 16, from 1st January 2012 to 30th April 2018 (before MUP implementation), and for 32 months after.

The study was adjusted for the pandemic using the Oxford COVID-19 Government Response Tracker, taking pandemic restrictions into consideration. The controls were England (geographical) and genitourinary conditions (non-geographical). MUP is not implemented in England, and alcohol is not known to contribute to genitourinary conditions. The cut-off for a statistically significant p-value was <0.05. The authors linked individuals' postcodes to map socioeconomic status.

Findings

In Scotland, there was a 13.4% reduction (95% CI -18.4 to -8.3; p=0.0004) in deaths related to alcohol consumption following MUP and a 4.1% reduction (-8.3 to 0.3; p=0.064) in hospitalisation. There was a 11.7% reduction (-16.7 to -6.4; p<0.0001) in alcohol-related liver disease deaths and 23% reduction (-36.9 to -6.0; p=0.0093) in deaths due to alcohol dependence syndrome. MUP prevented an estimated total of 156 deaths (-243 to -69) annually.

There was a 7.3% reduction (-9.5 to -4.9; p<0.0001) in hospitalisations for chronic conditions including alcohol-related liver disease but a non-significant increase in acute conditions (9.9% [-1.1 to 22.0]; p=0.076).

Across deaths and hospitalisations, there were larger reductions amongst males, individuals aged 35-64, and those from the lowest four socioeconomically deprived deciles.

Commentary

This study compared outcomes before and after MUP was implemented. Whilst there was a statistically significant decrease in deaths, the overall decrease in hospitalisation was not significant; the reduction in admissions related to chronic causes was offset by an increase in acute causes.

The largest impact was noted amongst males and those from socioeconomically deprived backgrounds, providing supportive evidence that MUP preferentially targets those at highest risk of alcohol-related harm. However, in doing so, such individuals may have consumed alcohol at the expense of nutrition, potentially accounting for higher rates of hospitalisation from acute causes after MUP introduction. As outcome data could not be directly linked to alcohol consumption, it was not possible to determine whether MUP really did impact those at highest risk.

When MUP was implemented, modelling predicted that the full benefit on alcohol-related mortality would not be evident until after 10-20 years.[5] However, even in people with established cirrhosis, alcohol abstinence is associated with a better prognosis, apparent within 3 years.[6] Whilst deaths secondary to alcohol-related cancers are unlikely to be captured in this study, the authors have hypothesised that a reduction in alcohol consumption will in turn reduce the risk of chronic conditions.

This is a high-quality study, applying appropriate controls and comparators, with the use of routinely collected data. It provides compelling evidence that the introduction of MUP in Scotland has saved lives.

References

1. Office for National Statistics (ONS). Alcohol-specific Deaths in the UK: Registered in 2021. Released 8 December 2022, ONS website, statistical bulletin
2. Purshouse RC, Meier PS, Brennan A, *et al*. Estimated effect of alcohol pricing policies on health and health economic outcomes in England: an epidemiological model. *Lancet*, 2010;375(9723):1355-1364.
3. Giles L, Mackay D, Richardson E, *et al*. Evaluating the impact of Minimum Unit Pricing (MUP) on sales-based alcohol consumption in Scotland at three years post-implementation. Edinburgh; Public Health Scotland, 2022
4. Wyper GM, Mackay DF, Fraser C, *et al*. Evaluating the impact of alcohol minimum unit pricing on deaths and hospitalisations in Scotland: a controlled interrupted time series study. *Lancet*, 2023;401(10385):1361-1370.
5. Holmes, J. et al. (2012) cited in Angus, C. et al (2016). Model-based appraisal of the comparative impact of Minimum Unit Pricing and taxation policies in Scotland. An adaptation of the Sheffield Alcohol Policy Model version 3. ScHARR, University of Sheffield.
6. Hofer BS, Simbrunner B, Hartl L, *et al*. Alcohol abstinence improves prognosis across all stages of portal hypertension in alcohol-related cirrhosis. *Clin Gastroenterol Hepatol* 2022;S1542-3565(22)01113-2.