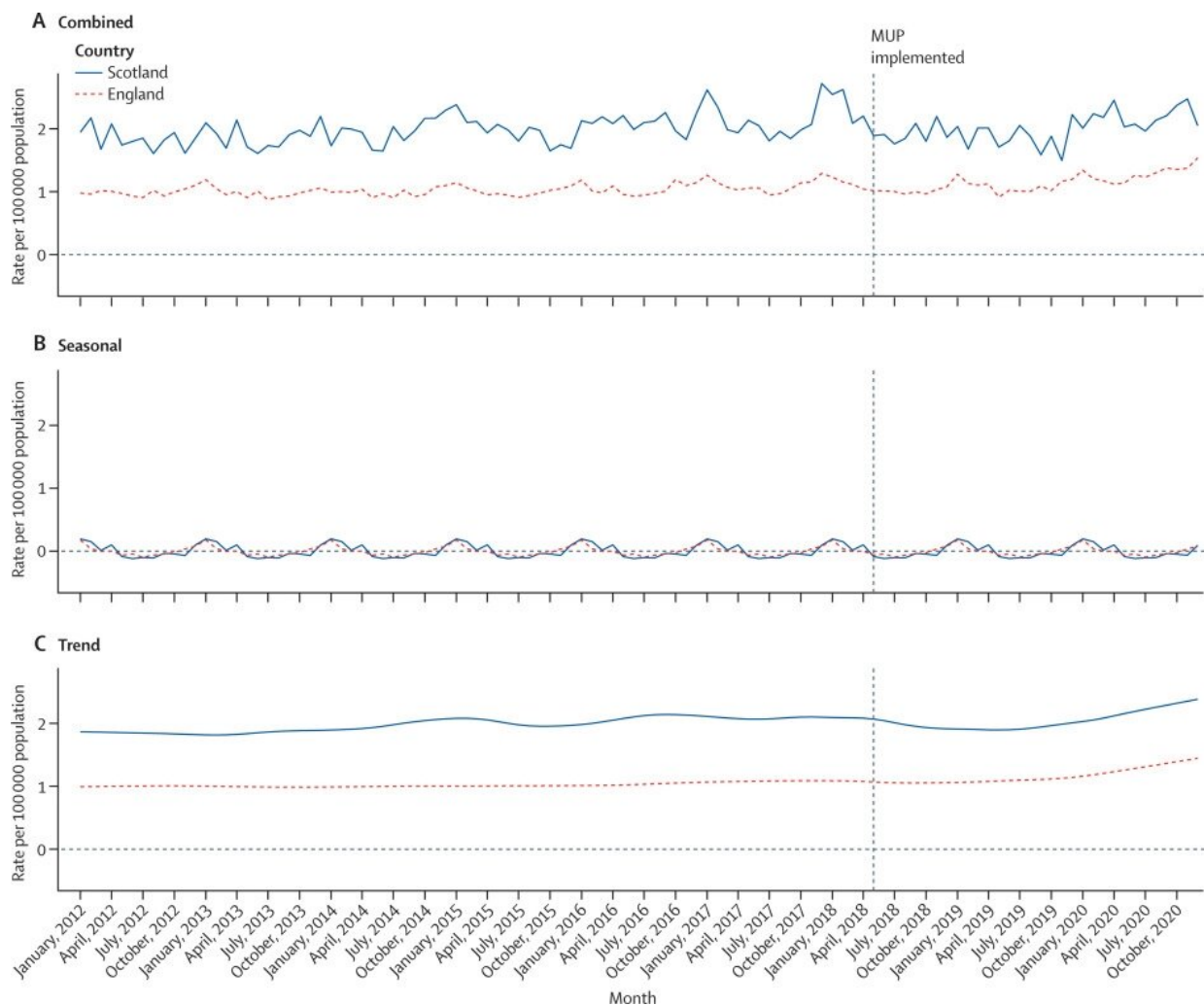


Minimum unit pricing for alcohol associated with a 13% decrease in deaths from alcohol consumption in Scotland

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Rate of deaths wholly attributable to alcohol consumption per 100 000 population by country Monthly rate (A), and decomposed seasonal (B) and trend

(C) components. MUP=minimum unit pricing. Credit: *The Lancet* (2023). DOI: 10.1016/S0140-6736(23)00497-X

The implementation of minimum unit pricing (MUP) legislation is associated with significant reductions in alcohol-specific deaths among those from the most socio-economically deprived areas in Scotland, suggests a new study published in *The Lancet*.

Over the two years and eight months following policy implementation, there was a 13% reduction in deaths from alcohol consumption compared to an estimate, using data from England, of the deaths that would have occurred had the legislation not been implemented. The 13% reduction is equivalent to avoiding around 150 deaths per year.

In May 2018 the Scottish government introduced legislation implementing a [minimum price](#) of 50 pence per unit of alcohol (10ml or 8g of pure alcohol). The policy was intended to mostly impact low-cost high-strength alcohol and to reduce alcohol consumption in the heaviest drinkers. Previous studies indicate the introduction of the policy reduced [alcohol sales](#) by 3%, with further research suggesting the greatest reductions were in households that purchased the most alcohol before the policy. However, no previous studies have looked at if the policy has led to reductions in alcohol-specific deaths and hospitalizations at the Scottish national level.

Wider evidence on the extent to which MUP has had an impact in Scotland will be provided to members of the Scottish Parliament ahead of the parliamentary vote on the future of MUP in Scotland in 2024.

"Scotland has the highest rate of death due to alcohol consumption in the U.K., with those living in the most socioeconomically deprived areas in

Scotland experiencing [death](#) rates more than five times higher compared to those living in the least deprived areas. The minimum unit pricing policy aims to tackle this inequality by reducing alcohol consumption, and therefore harms to health, in the heaviest drinkers who tend to buy the least expensive alcohol. Our findings indicate the policy is having a positive impact on public health—its implementation is associated with fewer alcohol-specific deaths in men and those living in the 40% most deprived areas of Scotland who are disproportionately dying of alcohol related harms," says Dr. Grant Wyper, Public Health Intelligence Adviser at Public Health Scotland.

Data was obtained from Scotland and England on alcohol-specific deaths and hospitalizations prior to the introduction of MUP legislation (January 2012 to April 2018) and two years and eight months afterwards (May 2018 to December 2020). Data from England was used to form a control group as a part of the U.K. where the legislation was not implemented. The researchers compared the change in deaths and hospitalizations in the two periods across the two countries while accounting for various other factors such as the level of government restrictions during the COVID-19 pandemic.

In the two years and eight months following the implementation of MUP, the policy was associated with a 13.4% decrease in deaths due to alcohol consumption, compared to an estimate of what would have occurred in the absence of MUP legislation. These figures are equivalent to around 150 alcohol-caused deaths each year on average. The statistically significant reductions in alcohol-specific deaths associated with MUP were observed in those living in the most socio-economically deprived 40% of Scotland.

The study also observed a 4.1% decrease in hospitalizations due to alcohol consumption associated with the policy, but this was not statistically significant.

The authors suggest the overall reduction in alcohol-specific deaths is driven by a decrease in deaths from long term conditions caused by alcohol consumption. MUP implementation was associated with a 11.7% reduction in deaths due to alcoholic liver disease and a 23% reduction in deaths from alcohol dependence syndrome.

However, MUP was also associated with an increase in the rate of deaths and hospitalizations due to short-term conditions caused by alcohol consumption, such as alcohol poisoning, although these findings were not statistically significant. The authors clarify that short-term conditions contribute to around 5% of alcohol-specific deaths in Scotland and therefore these estimates have a large degree of associated uncertainty. The wider evaluation of the policy has found some potential mechanisms that could lead to faster intoxication and thus explain these findings, such as the substitution of food intake for alcohol, due to the financial pressures of the policy.

Authors say these findings highlight the importance of ensuring timely, accessible services for those dependent on alcohol alongside the implementation of population level policies such as minimum unit pricing. Overall, due to the impact of long-term conditions offsetting that of the short-term conditions, the study finds a 13% reduction in alcohol-specific deaths associated with minimum unit pricing, indicating that the policy has an overall benefit to the health of the Scottish public.

The authors acknowledge some limitations to the study, including that there was an impact on hospital capacity and attendance during the COVID-19 pandemic, which increases the uncertainty of the study findings related to hospitalizations. Additionally, published estimates have indicated a recent worsening in alcohol-specific mortality in both Scotland and England. The study period did not include these recent data, however, the increase in the rate in Scotland from 2020 to 2021 (4%) was lower than in England (7%) and so the authors suggest it is

therefore unlikely that the inclusion of more recent data would have altered the main findings.

"In 2021, there were 1,245 alcohol-specific deaths in Scotland, the highest number since 2008. Over the last decade, there has been a decrease in improvements in life expectancy, with evidence of increasing inequalities, potentially further worsened due to the COVID-19 pandemic and the ongoing cost-of-living crisis. Our study provides the best evidence to date to link minimum alcohol pricing in Scotland with a significant reduction in deaths from [alcohol consumption](#) in people living in the most socio-economically deprived areas in Scotland," says Ms. Lucie Giles, Public Health Intelligence Principal at Public Health Scotland.

Writing in a Linked Comment, Dr. Sarah Callinan and Dr. Amy Pennay, La Trobe University, Australia, who were not involved in this research, said, "This work by Wyper and colleagues indicates that the policy has reduced disparities in [alcohol](#) related harms by reducing the harms experienced by those in lower socio-economic groups. Given the disproportionate experience of harm in these groups, this could thus be described as a well-targeted policy. However, it is also important to ensure that in parallel with such research and [policy](#) change that we are also acknowledging, researching, and advocating for policies that address the inequality that causes so much health harms in the first place."

More information: Grant M A Wyper 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). [DOI: 10.1016/S0140-6736\(23\)00497-X](https://doi.org/10.1016/S0140-6736(23)00497-X)

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