

A rapid narrative review of the evidence

Minimum Unit Pricing

Evidence and Innovation: Alcohol and Drug Foundation

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Declarations

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About the Alcohol and Drug Foundation

The [Alcohol and Drug Foundation \(ADF\)](https://www.adf.org.au) is Australia's leading organisation committed to inspiring positive change and delivering evidence-based approaches to minimise alcohol and drug harm. It is the best source of up-to-date, credible information on alcohol and other drugs, the latest research, prevention and harm minimisation advice, access to support services and place-based approaches to support community wellbeing.

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Acronyms and definitions

ADF	Alcohol and Drug Foundation.
AOD	Alcohol and other drugs.
Bradford Hill Causation Criteria	A framework of nine criteria applied to either a single study or body of evidence to determine causality or assess the impact of interventions when randomised controlled trials are not viable. It can determine the likely effectiveness of MUP as a policy to reduce alcohol consumption and alcohol-related harms. ¹
BDR (Banned Drinker Register)	A Northern Territory initiative that aims to reduce alcohol-related harm by identifying individuals banned from purchasing take-away alcohol.
CASP tool (Critical Appraisal Skills Programme)	A suite of checklists that can be applied to a variety of study designs to assess the quality and reliability of the research.
EPHPP tool (Effective Public Health Practice Project)	A quality assessment tool used to assess the methodological quality of quantitative studies in systematic reviews to establish the quality and reliability of the evidence for informing public health policies.
GBFV	Gender-based family violence, a broad concept which is intended to incorporate intimate partner violence (IPV), family and domestic violence (FDV) and child maltreatment.
MP (minimum pricing)	A fixed price level for an alcoholic product below which a specific volume of an alcoholic beverage cannot be sold to consumers. A minimum price is linked to the volume of beverage, rather than the volume of alcohol. Minimum pricing in this review was measured as: • Minimum Unit Pricing (volumetric by ethanol, e.g. \$X per unit of ethanol) • Minimum Pricing (volumetric by beverage, e.g. \$X per litre of wine) • Minimum Pricing (volumetric by beverage, but with price tiers within a category).²
MUP (minimum unit price/pricing)	A minimum pricing measure that sets a level below which a fixed volume of alcohol (such as a standard drink) cannot be sold to consumers and is linked to the volume of pure alcohol in a beverage. ²

MV	Motor vehicle.
NT	Northern Territory (Australia).
PALIs (Police Auxiliary Liquor Inspectors)	A specialised unit within the Northern Territory Police, focused on alcohol-related crime and violence, and responsible for patrolling bottle shops and enforcing the Banned Drinkers Register.
Primary studies	Original research studies that collect and analyse first hand data to evaluate the effects of an intervention or policy, rather than synthesising findings from existing studies.
RTD (Ready-to-Drink)	Premixed alcoholic beverages that are packaged (bottled or canned) for immediate consumption, on the go or at home.
Sheffield Alcohol Policy Model (SAPM)	The SAPM was developed in the UK and is a tool used to model and evaluate economic and health impacts of alcohol policies, such as MUP and alcohol taxation, to inform strategies that aim to reduce alcohol-related harms. The Sheffield Tobacco and Alcohol Policy Model was developed from SAPM, and models and evaluates tobacco policies. ³

Summary of findings

Background

Minimum unit pricing (MUP) is a population-level alcohol pricing policy that sets a floor price per unit of alcohol, targeting the cheapest products most consumed by people who drink heavily. International evidence has identified price-based policies as among the most effective measures for reducing alcohol consumption and related harms. In Australia, MUP was implemented in the Northern Territory (NT) in 2018 but repealed in 2025, prompting renewed interest in the overall strength of the evidence and its relevance for future policy decisions.

Methods

This rapid narrative review synthesised evidence published between 2010 and 2025, including six review studies and 18 additional empirical and modelling studies uncaptured in previous reviews. Eligible studies examined the impact of minimum pricing policies on alcohol consumption, alcohol-related harms and unintended consequences in Australia and comparable high income jurisdictions. Greater weight was given to quasi-experimental studies using objective outcomes, with modelling studies used to assess impacts under alternative policy scenarios.

Findings

Across study designs and settings, evidence consistently indicates that MUP reduces purchases of the cheapest alcohol and is associated with reductions in selected alcohol-related harms, particularly those linked to heavy drinking. Quasi-experimental studies from Scotland provide the strongest causal evidence, with convergent but more contextually confounded findings from the NT. Modelling studies suggest that impacts increase when minimum prices are set higher and maintained in real terms. Reductions in harms are most evident for chronic health outcomes and disproportionately benefit people who drink heavily and populations experiencing socioeconomic disadvantage. Evidence of large scale unintended consequences is limited, although qualitative studies highlight potential risks for vulnerable subgroups.

Conclusion

Overall, there is moderate to strong evidence supporting MUP as an effective population level policy to reduce alcohol consumption and related harms, with the greatest benefits for those at highest risk. The extent of impact in Australia is likely to depend on policy design, interaction with existing alcohol controls and the inclusion of complementary supports for vulnerable populations.

Key messages

- MUP consistently reduces purchases of the cheapest alcohol, with effects concentrated among people who drink heavily and those most at risk of alcohol-related harm.
- The strongest causal evidence comes from quasi-experimental studies using objective data, supported by modelling studies showing that benefits increase when minimum prices are set higher and maintained over time.
- MUP has the potential to reduce alcohol-related harms and health inequities.

Summary of impacts by outcome

Outcome	Summary of evidence
Alcohol consumption	Consistent reductions observed in purchases of cheapest alcohol, particularly among heavy drinkers.
Injury / acute harms	Mixed or limited evidence of short-term changes.
Hospitalisations and health harms	Reductions observed, particularly for chronic alcohol-related conditions.
Alcohol-related deaths	Reductions observed, stronger for chronic disease-related outcomes and among heavy drinkers.
Violence / crime	Reductions observed, though attribution varies.
Gender-based family violence	Some reductions observed, though attribution varies.
Unintended consequences	Limited evidence; no consistent evidence of increased crime, substitution or displacement of essential spending (e.g. food).
Treatment and service use	Not systematically assessed, limited indirect evidence.
Equity	Greater benefits for lower-income and high-risk groups.
Tourism and other economic outcomes	Not a primary focus of studies included in this review.

Key stats

- Results synthesised from 24 studies published in the last 15 years: 6 reviews and 18 additional primary empirical or modelling studies uncaptured in previous reviews.
- Consistent consumption effects: Scottish evaluations found around 2–4% reductions in off-premise alcohol sales, driven entirely by declines in the cheapest products.
- Disproportionate benefits: the heaviest drinkers account for most of the reduction in consumption, with minimal impacts on light/moderate drinkers and higher income groups.

1. Introduction

1.1 Background

Alcohol is the most widely used drug in Australia, and is also considered the most harmful.^{4, 5, 6} Alcohol-related harms include acute outcomes such as accidents, injuries and gender-based family violence (GBFV), as well as long-term impacts like liver disease, cancer and premature death. Although harms are concentrated among those who drink at risky levels, they are not evenly distributed across the population. In 2019, the heaviest 10% of drinkers in Australia consumed 54% of all alcohol, and were more likely to be men and to live in rural and regional areas.⁷ However, even after accounting for the amount of alcohol consumed and drinking patterns, people from lower socioeconomic backgrounds experience disproportionate alcohol-related harms, a phenomenon known as the ‘alcohol harm paradox’.⁸

Evidence suggests that the availability of low-cost alcohol is associated with increased alcohol consumption and greater related harms.² People who drink inexpensive beverages, including cask wine, are more likely to consume higher quantities of alcohol.⁹ Those who engage in heavy drinking are also more likely to prefer low-priced beverages compared to infrequent or moderate drinkers.² When the cost of these products increases, heavy drinkers tend to drink less, leading to reductions in some alcohol-related harms.² Price-based policies, including price controls, have been identified by the World Health Organization as among the most effective measures available to governments to reduce alcohol-related harms.²

Minimum pricing can prevent low-cost selling of existing products and the introduction of new products sold at lower prices. It is a broad category of pricing policies that set a fixed (or floor) price below which a specific volume of an alcohol product cannot be sold and can be implemented in different ways.²

One approach is to link the minimum price to the volume of alcohol in the beverage – known as minimum unit price (MUP). This is often tied to a standard drink and operationalised as \$X per unit of ethanol. Alternatively, minimum pricing can be linked to the volume of the beverage, such as a fixed price per litre of wine, with or without price tiers within a category.² While both approaches are used internationally, comprehensive MUP policies are currently implemented in a relatively small number of jurisdictions.²

The first implementation of a MUP in Australia occurred in the Northern Territory (NT) in October 2018, where a floor price of \$1.30 per standard drink was introduced.¹⁰ During 2017-18, the NT Government also implemented a Banned Drinker Register (BDR) across the Territory, and introduced Police Auxiliary Liquor Inspectors (PALIs) in three regional towns; along with restrictions on daily purchases/opening hours (DPOH) in one regional town. The introduction of MUP alongside other alcohol control policies, implemented at different times and locations (e.g. PALIs introduced alongside MUP in Alice Springs but not in Darwin, the largest city in the NT, and BDR introduced at a different time point to MUP), complicated efforts to isolate the specific effects of MUP and understate how it interacts with other policies. Despite evidence that MUP was associated with several population-health benefits in the NT, including a 51% reduction in cask wine consumption,¹¹ and no observed negative impacts on the local economy,¹² MUP was repealed in March 2025 by the incoming Country Liberal Party, following an election commitment where the effectiveness of the policy was contested.¹³ Arguments against MUP commonly cite potential adverse impacts on light or moderate drinkers, higher income consumers, and the alcohol industry, particularly through increased prices for some products without proportionate individual or economic benefits.^{2, 14} Another commonly raised concern is that MUP could drive people who drink heavily to substitute their preferred beverages with cheaper, counterfeit or illicit alcohol, or other substances.¹⁵

The impact and effectiveness of MUP on alcohol consumption and related harms are likely to be influenced by several factors including the minimum price level selected, the scope and coverage of the policy, the strength of enforcement and contextual factors such as affordability, existing regulatory settings and pre-MUP price levels. As randomised controlled trials are not feasible for evaluating population-level alcohol policies, researchers have applied alternative assessment tools, including the Bradford Hill Causation Criteria¹ and the Sheffield Alcohol Policy Model (SAPM),³ to assess the effectiveness of pricing mechanisms, and the likelihood of a causal relationship between MUP and reductions in alcohol consumption and related harms. Given the complexity of policy implementation, there remains a need for a comprehensive synthesis of all available evidence to inform policy and practice.

1.2 Purpose

This review aims to synthesise the available evidence on the impact and effectiveness of a MUP for alcohol. In undertaking this review, we seek to inform evidence-based decision-making.

1.3 Research question

The research question for the review was developed collaboratively by the authors, using the PICOT (patient, intervention, comparison, outcome, and time) framework, guided by the aims and purpose of the review, and reviewed by external experts.

The main research question for this review was: *“What is the evidence from empirical and modelling studies on the impact of MUP on alcohol consumption, alcohol-related harms, and any unintended consequences in Australia and comparable jurisdictions?”*

2. Methods

The review aligns with Cochrane’s definition of a rapid review – a streamlined form of knowledge synthesis that accelerates the systematic process of reviewing evidence by simplifying or removing specific steps to produce timely, resource efficient evidence for decision makers.¹⁶ The PRISMA guidelines for systematic reviews were used to inform the structure of this report.¹⁷

2.1 Eligibility criteria

The search was limited to literature published between 2010 and 2025 and included peer-reviewed publications and grey literature reports; however, grey literature was excluded where a corresponding peer-reviewed publication existed. Eligible studies were required to report pre and post intervention data, either observed or projected through modelling. Study designs considered for inclusion comprised systematic and rapid reviews, and for individual studies, randomised controlled trials, mixed-methods studies, quasi-experimental studies, cohort and case-control studies, and economic evaluations. For individual studies, we searched only for studies published within Australia, New Zealand, the United States of America (USA), Canada, Ireland and the United Kingdom (England, Wales, Scotland and Northern Ireland) to maintain jurisdictional comparability to Australia.

Literature was excluded if it compared policy differences across jurisdictions without examining associated harms or impacts, employed cross sectional, qualitative or case report designs, or lacked pre, post or longitudinal data. In addition, commentaries, editorials, opinion pieces, book chapters, dissertations, conference abstracts, policy documents, position papers, letters and policy submissions were not eligible for inclusion.

2.2 Search strategy

The types of harms investigated included alcohol consumption and related harms, including drink driving, traffic crashes and fatalities, injury, assaults, alcohol-related hospitalisations and deaths, ambulance attendances and GBFV. Studies that investigated unintended consequences were also considered, including switching from alcohol to other substances, deferring expenditure from daily essentials to alcohol and increased crime.

Search terms and synonyms were developed by the authors and reviewed by external experts and key staff. Key search terms included ‘alcohol’, ‘minimum unit price’ or ‘MUP’, ‘consumption’ and ‘harms.’ Strings were tested using several seed articles, revised and finalised by the Librarian, and then applied across the ADF Library (specialist AOD library), Google Scholar and Pub Med Central for peer-reviewed literature, and Google for grey literature.

2.3 Screening and selection

Searches were completed in November 2025 by the Librarian, with the first 100 relevant results from each search string assessed according to the search strategy, duplicates removed, and all eligible publications saved and imported to [Covidence](#) (web-based systematic review tool) for abstract and full text review. All abstracts were single screened by MS, NB or SZ, with 20% of full texts dual screened by NB. In addition, hand searching of references was conducted for papers that addressed the general topic but did not align with the research question. Any full text papers that were identified as ineligible for inclusion were discussed between reviewers to reach consensus.

After abstract screening, six systematic or narrative reviews and 63 relevant primary studies were identified. Mapping the 63 eligible primary studies against the six included reviews showed substantial overlap, with 43 studies included in at least one review and no review capturing more than one third of the evidence base. Notably, 18 primary studies had not yet been synthesised in any review, including nine published within the last five years. These more recent studies also encompass outcomes and populations that have received increasing attention in MUP research, including implementation effects, subgroup impacts and outcomes beyond alcohol consumption alone. In response, and after consulting with both internal and external advisors, a combined synthesis approach was adopted. This comprised a rapid umbrella review of six reviews to summarise higher-level findings, alongside a synthesis of 18 primary studies.

2.4 Data extraction and evidence synthesis

Data extraction fields were developed and tested in Covidence, tailored to the included study designs and the research question. Data extraction was performed by one of three authors (NB, MS and SZ), and the extracted data was verified by a different author (NB or MS). The extracted data was imported into an Excel spreadsheet, cleaned and organised into tables by MS and NB.

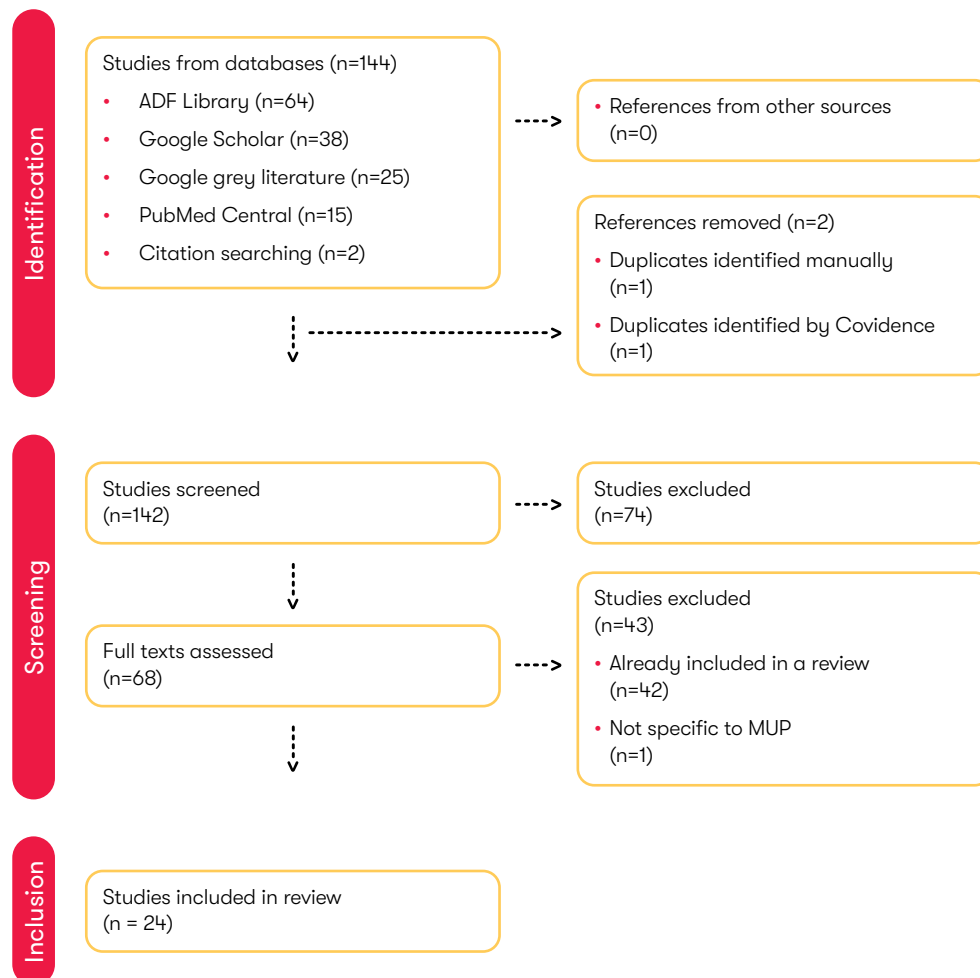
A narrative synthesis of the findings was then conducted by MS and NB. Based on advice from external experts, greater weight was given to quasi-experimental studies using objective outcomes, as these provide the strongest bases for causal inference at the population level.¹ Modelling studies were used to complement empirical study findings and assess impacts under alternative policy scenarios. Self-report data were interpreted more cautiously due to data limitations (e.g. recall bias, social desirability bias, sampling constraints) and qualitative data were examined for contextual evidence.

3. Results

3.1 Search results and screening

Search results were assessed for eligibility and subsequently screened for full text review, as summarised in Figure 1 below.

Figure 1: PRISMA flow diagram



3.2 Characteristics of all included studies

Twenty-four studies were considered eligible for inclusion in the review (see Tables 1-3 in the Appendices for a full summary of results).

3.2.1 Study designs

The included studies consisted of modelling studies (n = 10, 42%), followed by empirical studies (interrupted time series, retrospective time series, and time series studies) (n = 7, 29%), reviews (n = 6, 25%) and one mixed-methods study.

3.2.2 Year published

More than half of all 24 included studies were published between 2021 and 2025 (n = 15, 63%), with the remaining studies published between 2010 and 2020 (n = 9, 38%).

3.2.3 Outcomes studied

Across the included modelling and empirical studies, the most frequently examined outcomes were adult alcohol use or dependence (n = 13, 74%), violent and assaultive crime (n = 11, 61%), and emergency presentations and hospitalisations (n = 8, 44%).

Less commonly studied outcomes included mortality and morbidity (n = 5, 28%), GBFV (n = 5, 28%), financial outcomes (household or consumer spending; n = 5, 28%), motor vehicle or traffic offences (n = 5, 28%), non-violent crime (n = 4, 22%), and alcohol sales as a proxy for alcohol use (n = 2, 11%).

Several additional outcomes were examined in only one study each: child or adolescent alcohol use, workplace absence, retailers' revenue, NHS costs, health inequalities, protective custody episodes, school attendance, tourism, and licensing and wholesale alcohol supply.

3.3 Characteristics of studies by study design

3.3.1 Reviews

The included six reviews were published in 2017 (n = 2), 2023 (n = 3), and 2025 (n = 1), with two led by Canadian authors, another two by UK authors, and one each from Australia and Ireland.

While all six reviews examined MUP as a population-level alcohol policy, they addressed different research questions. Two reviews focused on specific outcomes, with one concentrated on alcohol consumption,¹⁸ and a second on alcohol-related hospitalisations and mortality.¹⁹ One focused broadly on whether price-based policies reduce alcohol consumption and related harms in specific jurisdictions for Scotland,²⁰ while another explicitly examined whether observed associations could be considered causal using the Bradford Hill Criteria.¹ Two reviews examined MUP from an equity lens, including differential impacts on people who drink heavily and those in lower socioeconomic groups,^{18, 21} including unintended consequences.²¹

3.3.2 Empirical studies

Eight empirical studies were included in this review, all of which evaluated MUP policies, with publication dates ranging from 2017 to 2025.

Five studies were Australian, all examining the impact of a MUP of \$1.30 (AUD) per unit (where a standard drink is 10g of ethanol), introduced in the NT in October 2018.²²⁻²⁶ Two studies from Scotland examined the impact of the introduction of a MUP of 50p per unit (where a standard drink is 8g) in Scotland in 2018,

one-year post-implementation²⁷ and three years post-implementation.²⁸ Finally, one Canadian study investigated the impact of a MUP introduced in April 2010 in Saskatchewan on alcohol-related crime (where a standard drink is 13.45mg).²⁹ The Saskatchewan policy differed from standard MUP approaches, applying minimum prices within beverage-specific and alcohol-strength categories rather than a consistent price per unit of alcohol across all products.

Data sources were predominantly secondary (n = 8), mostly from police records and hospital data, with one Australian study using mixed methods designs to combine secondary data from police and hospital records, with population-based telephone interviews and qualitative interviews with key informants.

Regarding outcomes, violent and assaultive crime (n = 6, 75%) was the most studied outcome, followed by GBFV (n = 4, 50%), motor vehicle/traffic offences (n = 4, 50%), adult alcohol use and dependence (n = 3, 38%), emergency presentations and hospitalisations (n = 3, 38%), with non-violent crime, alcohol sales, and underage alcohol use the least studied (n = 1, 13% each).

3.3.3 Modelling studies

Ten modelling studies were included, with a broad range across publication dates spanning 15 years: 2010 to 2025.

Of the 10 studies, three Australian studies modelled different MUP scenarios (AUD \$1.30, \$1.50, \$2.00) beyond the NT to subpopulations across the country.³⁰⁻³² Studies from the UK, included three modelling studies investigating the impact of introducing a 50p per unit MUP in England, and two from Scotland and Wales modelling the effects of different MUP thresholds using the Sheffield Tobacco and Alcohol Policy Model (STAPM). One Canadian study modelled the effects of raising the MUP in Saskatchewan, while one USA study modelled two MUP scenarios (USD 0.40 and 0.45) for spirits in Michigan.

Among the modelling studies, adult alcohol use and dependence was markedly the most studied outcome (n = 9, 90%), followed by mortality and morbidity (n = 5, 50%), violent and assaultive crime (n = 5, 50%), emergency presentations and hospitalisations (n = 5, 50%), financial outcomes (n = 5, 50%), and non-violent crime (n = 2, 22%), with domestic violence, motor vehicle/traffic offences, and alcohol sales the least studied (n = 1, 10% each).

4. Evidence statement (findings)

4.1 Alcohol use among those who engage in heavy or high-risk drinking

4.1.1 Reviews

In 2017, an Australian study summarised the findings of recent meta-analyses and systematic reviews on the estimated effect of taxes and prices on alcohol consumption in the last 10 years, alongside policy evaluations in the UK, Canada and Australia.³³ The study cited evidence from four reviews to argue that alcohol price increases consistently lead to reductions in alcohol consumption. One meta-analysis indicated that a 1% increase in the price of alcohol on average reduces demand by .5%. Across studies, they also found the magnitude of price effects vary by subgroup and beverage type. The review also highlighted three areas of 'controversy in the literature', including a lack of consensus on the most appropriate taxation and pricing policy in many countries and the differential policy effects by consumption and income level. The importance in obtaining accurate alcohol price data was emphasised, which would reduce bias in estimating price responsiveness and help support accurate examination of the impact on heaviest drinkers. A major limitation of this review is there was no reporting on the inclusion criteria of studies reviewed, and as such the findings may be subject to reporting and author bias.

In 2023, Public Health Scotland (PHS) commissioned an evaluation of the 50p per unit MUP introduced in 2018.²⁰ To examine the effects on alcohol consumption, they analysed 21 papers (13 quantitative, four qualitative and four mixed methods) including several analysing alcohol sales and purchasing data and cross-sectional studies drawing on self-report measures of alcohol consumption. Using the EPHPP quality assessment tool, 13 studies were rated strong and six moderate. Two interrupted time series analyses studies provided strong evidence that MUP was associated with reduced alcohol sales, one and three years following implementation. On average, the studies suggested that total alcohol sales reduced by 3%, driven entirely by a reduction in off-premise sales of alcohol at supermarkets and other stores, with little evidence of any changes in on-premise alcohol sales. Data from three other studies indicated that the households that purchased the most prior to the policy had the greatest reductions in their alcohol purchasing after MUP was introduced. They found that MUP most impacted the price of ciders and spirits, which was reflected in these products having the greatest sales reductions. Evidence from self report, cross sectional surveys suggested modest reductions in alcohol consumption following MUP, particularly among heavier drinkers and some subgroups, with limited or mixed effects among hazardous drinkers and those with alcohol dependence. However, interpretation is constrained by methodological limitations of self report survey data, including recall and social desirability bias, sampling issues, and challenges in consistently capturing the heaviest drinkers over time. Qualitative findings suggested that MUP was associated with changes in drinking behaviour, including changes in the amount and type of alcohol consumed. Stakeholders working with families affected by alcohol reported perceived reductions in drinking among people drinking at hazardous or harmful levels, but not those with alcohol dependence.

A systematic review estimated the effects of alcohol taxation, pricing policies, and restricted temporal availability on overall alcohol consumption and reviewed their differential impact across sociodemographic groups.¹⁸ The study examined ten Australian, Scottish and Welsh interventional or observational studies (published between 2000 and 2022) at individual or population level looking at alcohol consumption, with a comparison to a baseline or a reference. The two Australian studies found that introducing the \$1.30 AUD MUP in the NT led to a 50% drop in cask wine consumption within 12 months,¹¹ along with short and longer-term reductions in overall alcohol consumption measured through repeated wastewater data.³⁴ A meta-analysis of five studies suggested that introducing minimum pricing (Int\$ 0.90/10 g of pure alcohol) reduced consumption by 10%, however given the small number of studies included in the meta-analysis, results should be interpreted with caution. The study found pricing policies resulted in greater changes in

alcohol consumption among low-income drinkers, while results were inconclusive for other socioeconomic indicators, gender, and racial and ethnic groups. The study concluded that taxation increases, the introduction of MUP, and restrictions of temporal availability all contribute to a decline in drinking levels.

A 2025 rapid review²¹ examined the impact of minimum pricing on vulnerable populations and health equity for a government-commissioned evaluation. Across 11 studies examining changes in consumption among people who drink heavily (none Australian), evidence from sales, purchasing, and some self report data indicates that minimum pricing is generally associated with reductions in alcohol consumption among high risk drinkers, particularly those drinking heavily prior to policy implementation. However, self report studies show more mixed findings, with limited or no change observed among people with alcohol dependence, and some outcomes varying by gender, age, and socioeconomic context. Evidence from five studies (including one cross-sectional Australian study³⁵) also suggests that alcohol expenditure increases mainly among those who drink heavily after MUP is introduced, suggesting the policy effectively targets its intended group. Across nine studies examining alcohol consumption among lower income groups (no Australian), findings were mixed, with some purchasing and survey data showing greater consumption reductions among low-income households, others showing greater reductions among higher income or more affluent groups, and several finding no significant differences by income or socioeconomic status. Overall, the reviewed evidence did not show a consistent income gradient effect of MUP on alcohol use.

Finally, a 2017 systematic review examined 33 population level studies (1974–2017) to assess the evidence for causality for MUP using the Bradford Hill criteria.¹ It concluded it is highly probable, though not definitive, that introducing MUP would reduce alcohol consumption noting that all nine Bradford Hill Criteria were met, albeit with weaker support for the strength of association and experiment Criteria. The review, however, provided little discussion of the magnitude of effects, with no meta-analysis given substantial heterogeneity in included study designs and outcomes, and no discussion of any differential effects on subgroups.

4.1.2 Empirical studies

The empirical studies summarised in this, and subsequent sections, are presented in addition to those included within the review-level evidence described above and are not intended to represent an exhaustive list of all primary studies on MUP.

Australia

One 2020 time series analysis,²² examined the association between MUP and alcohol use in the NT, Australia, reporting significant short-term reductions in wholesale alcohol supply per capita, particularly cask wine. Most other beverages were unaffected, for example significant gradual increases in the supply of light beer were observed in the Katherine region.

The United Kingdom

Two primary studies^{27, 28} examined the impact of the Scottish MUP. In a 2021 interrupted time series analysis, the Scottish MUP was associated with a 2% reduction in off-trade alcohol sales per adult in the 12-months post policy introduction. Over the same period, per adult alcohol sales increased in England and Wales, where MUP did not apply. In models adjusted for household income and on trade sales, and controlling for alcohol sales trends in England and Wales, the estimated net reduction in per adult off-trade sales in Scotland was 3.5%. Reductions in sales were primarily driven by decreased purchases of cider, perry (cider made from Perry pears) and spirits.

Using three years of data, a separate interrupted time-series analysis found MUP was associated with a 3.0% reduction in total per adult alcohol sales in Scotland relative to England/Wales, with the reductions driven by a 3.6% net decline in off trade sales.²⁸ The greatest reductions were observed for cider and perry, followed by beer and spirits; with little change for wine and RTDs (Ready-to-Drinks), and increases in fortified wine. The study concluded that MUP has been effective in reducing population-level alcohol sales in Scotland in the three years following implementation.

4.1.3 Modelling studies

The modelling studies summarised in this and subsequent sections are presented in addition to those included within the review-level evidence described above and are not intended to represent an exhaustive list of all modelling studies on MUP.

Australia

Three Australian studies modelled impacts on alcohol consumption, with consistent findings of an association between MUP and a reduction in alcohol use among heavier and high-risk drinkers, although the magnitude and most impacted subgroups differed across studies.³⁰⁻³²

A 2019 modelling study¹⁴ estimated the distributional effects of introducing a \$2.00 AUD MUP per standard drink (10g of pure alcohol) and compared these impacts with a broadly equivalent alcohol tax applied across wealth groups. The study found that a \$2.00 AUD MUP would be associated with a very small reduction in overall alcohol purchasing (–0.16%), with effects concentrated among the heaviest purchasing households.

A subsequent 2020 modelling study examined a range of alcohol pricing policies including minimum pricing and similarly predicted reductions in alcohol consumption, with the size of effects varying by policy strength and subgroup.¹³ The findings suggested minimum pricing was most effective when the floor price was set at higher thresholds (approximately \$1.00–\$1.50 per standard drink), with reductions concentrated among higher risk drinkers, lower income groups and older drinkers (subgroups that are more likely to purchase cheaper alcohol).

A more recent 2024 study³² modelled a MUP of \$1.30 AUD and \$1.50 AUD per standard drink, with the largest predicted reductions occurring among younger age groups under a MUP of \$1.50 per standard drink across most age and gender groups.

In summary, across all three Australian studies, the direction of effect was consistently negative, with larger and more policy-relevant impacts at MUP levels around \$1.00–\$1.50 AUD, and effects concentrated among heavier and higher-risk drinkers.

The United Kingdom

Five studies estimated minimum pricing impacts on alcohol use across England,^{36, 37} Wales,³⁸ Scotland³⁹ and the UK as a whole.¹⁴ All studies provided consistent evidence of an association between MUP and reductions in alcohol consumption among those who purchase cheaper or high volumes of alcohol.

In 2010, a study modelled the introduction of a 50p per unit MUP across the UK and found substantial reductions in population-level alcohol consumption.¹⁴ These reductions were primarily driven by effects on lower-income households who purchase cheaper alcohol. In 2013, a modelling study applied the SAPM to estimate the impact of a 45p per unit MUP in England across drinking and income groups.³⁶ Their findings suggested that a MUP would result in substantial reductions among harmful drinkers, particularly those on lower incomes.

Three recent studies published between 2023 and 2025 shifted focus from policy introduction effects to scaling and optimisation effects.³⁷⁻³⁹ A 2023 modelling study assessed the effectiveness of implementing a 50p per unit MUP at local and regional levels in England compared with national implementation.³⁷ The findings suggested that MUP would reduce alcohol-related harms across England, with particularly large health gains in regions with higher baseline consumption and disadvantage, and among heavier drinkers. The study concluded that a MUP has the potential to not only reduce overall alcohol use, but also reduce health inequalities.³⁷

Studies from Scotland³⁹ and Wales³⁸ explored the impacts of increasing or removing a MUP. A 2023 modelling study examined scenarios that increased, reduced, removed or indexed Scotland's existing 50p MUP to inflation.³⁹ The findings suggested increasing or uprating MUP would lead to further reductions in

drinking, while reducing or removing MUP resulted in increased alcohol consumption. Similarly, a 2025 study evaluated future options for Wales Minimum Price for Alcohol (MPA), introduced at 50p per unit in 2020.³⁸ Their modelling showed that increasing the MPA threshold to between 55p and 80p per unit would further reduce alcohol use, while reducing it to 40p or 45p, or removing the policy entirely, would increase consumption.

In summary, UK modelling studies report consistent relationships between MUP and reductions in drinking among those who are likely to experience the most alcohol-related harms. Like Australian modelling studies, the magnitude of effects varies, with effects larger for heavier and harmful drinkers, and among those from lower socioeconomic groups. Increasing, maintaining or uprating MUP amplified reductions, with larger effects observed at higher minimum price thresholds, while reducing or removing MUP reversed effects.

North America

A USA study modelled the introduction of volumetric minimum unit pricing for spirits in Michigan at two price thresholds (USD \$0.40 and \$0.45 per standard drink).⁴⁰ Both scenarios were associated with reductions in alcohol consumption and alcohol sales, with larger reductions observed at the higher price point and consistent decreases across population subgroups despite differences in baseline drinking patterns.

4.2 Alcohol-related harms

4.2.1 Reviews

In the UK, a systematic review of 22 studies, published in the previous decade (between 2011–22), explored the impact of MUP on alcohol-related hospitalisations.¹⁹ Included studies from Australia, Canada, the UK, Ireland and South Africa examined alcohol-related hospitalisations, length of stay, inpatient alcohol-related liver disease and mortality, from modelling and natural experiments. Study quality was assessed using the EPHPP tool and the Bradford Hill Criteria was applied to infer causality. Most real-world studies found acute alcohol-related hospital admissions immediately reduced by 2–9%, and chronic alcohol-related admissions lagged by 2–3 years and reduced by 4–9% annually. Modelling studies estimated that MUP could reduce alcohol-related admissions by 3–10% annually. The review concluded there was a ‘moderate-to-strong’ causal relationship between MUP and alcohol-related hospitalisation (using the Bradford Hill Criteria). Overall, the review concluded that the majority of empirical studies were consistent with modelling studies, supporting the role of minimum pricing strategies in reducing alcohol-related healthcare burden.¹⁹

The evaluation²⁰ of Scotland’s 50p MUP found strong evidence from six studies (two quantitative and four mixed methods) that MUP was associated with relative reductions in alcohol-related deaths, when compared to England. A smaller, non-significant reduction was also observed in hospital admissions wholly attributed to alcohol. Significant reductions in deaths were identified among males, females, people aged 35 – 65 years, people aged 65 years or more, and for people within the four lowest socioeconomic deciles, with the largest reductions observed for men, people aged 65 years and over and those living in the 40% most deprived areas of Scotland. There was strong evidence that the reductions in deaths and hospitalisations were driven by a reduction in chronic conditions, with less certain evidence that MUP was associated with an increase in deaths or hospitalisations due to acute causes, including intoxication. In qualitative studies, some professionals reflected that reduced affordability was driving individuals to seek treatment. No consistent population-level evidence was found that MUP impacted ambulance callouts, ED attendances and medication prescribing. The study concluded that evidence supports that the Scottish MUP has had a positive impact on health outcomes and contributes to addressing alcohol-related health inequalities.²⁰

In a 2025 rapid review,²¹ effects of MUP were strongest for those who engaged in heavy drinking across alcohol-related harms. Two short-term studies of hospital and emergency department presentations in Scotland and Ireland found no clear changes in heavy drinking or binge drinking following MUP implementation. In contrast, three Australian studies reported moderate to large reductions in alcohol-related intensive care unit admissions following the NT introduction of MUP alongside other policies (limiting attribution of effect to MUP alone), with reductions ranging from 38–54%, particularly for acute harms.^{41–43} Evidence for alcohol-related liver disease was consistent but more moderate. Two Scottish studies, using quasi-experimental designs with clear counterfactuals, found significant reductions in alcohol-liver disease-related deaths and hospitalisations and fewer inpatient episodes and complications, though no changes in disease severity or mortality related to acute harms were observed. Among individuals with alcohol use disorder, MUP in Scotland was associated with a 23% reduction in alcohol use disorder-related deaths, while treatment and hospitalisation indicators showed mixed patterns, likely reflecting increased help seeking. Findings for alcohol intoxication were inconsistent, with no evidence of increases in alcohol withdrawal, and both qualitative and quantitative studies suggesting stable or reduced withdrawal-related presentations.

Overall, the review of evidence, with greatest weight given to quasi-experimental studies with clear counterfactuals, suggests that MUP is most strongly associated with reductions in severe, chronic harms related to heavy drinking, rather than short-term changes in general hospital or emergency presentations.

In the same review,²¹ findings from seven studies (primarily from Scotland with one from Canada), indicate that minimum pricing is associated with disproportionately greater reductions in severe alcohol-related harms among low-income populations. These include larger declines in wholly alcohol attributable deaths and hospitalisations in more socioeconomically disadvantaged areas, while effects on other harms (e.g. prescriptions, injuries, traffic outcomes) generally did not differ by income. Among people experiencing housing instability, evidence from two Scottish qualitative studies found mixed short-term experiences, including beverage substitution and some intoxication. However, these studies also reported opportunities for harm reduction engagement and found no evidence of increased alcohol withdrawal, indicating no consistent worsening of alcohol-related harms in this group.²¹

Finally, a 2017 systematic review synthesised 33 population-level studies, including modelling and observational studies, and concluded it is highly probable (though not definitive) that introducing MUP reduces alcohol-related harms.¹ Evidence met all Bradford Hill Causality Criteria, with weaker support for the “strength of association” and “experiment” criteria. For example, for the plausibility criteria, evidence from 21/26 research studies and 4/7 studies in the grey literature supported the conclusion that the price of alcohol is inversely related to alcohol-related morbidity, hospital admissions or mortality.

4.2.2 Empirical studies

Australia

Five Australian studies examined the association of MUP introduced in the NT with alcohol-related harms.^{22–25, 44} Four quantitative studies^{23–25, 44} and one mixed methods study²² examined outcomes ranging from short-term (12 months for four studies) to medium-term (up to five years for two studies). Evidence suggests that the \$1.30 AUD per standard drink MUP was associated with reductions in several alcohol-related harms, although attribution is complicated by the simultaneous introduction of two complementary policies, BDR and PALIs.

For violence and crime, findings were generally consistent. Three studies^{22–24} examining violence and crime reported reductions in police-recorded alcohol-related assaults following MUP, with the magnitude of effects varying by region. Reductions ranged from 11% NT-wide²⁴ to as high as 44% in Alice Springs,²³ although in Alice Springs the observed reductions are likely attributable to PALIs and prior pricing restrictions, which meant MUP represented a smaller relative price change. One study reported a significant reduction in alcohol-related road traffic crashes, and child protection notifications, protection

orders and out-of-home care cases²² In contrast, sexual assault outcomes showed no detectable change in one study,⁴⁴ however under-reporting of sexual assault may have limited power to detect an effect.

Evidence for health-related reported harms was reported in two studies examining injury^{22, 25} which found significant reductions in ED presentations, with a 12.2% annual decrease between 2017 and 2022 following policy implementation.²⁵

Overall, these five studies provide moderate evidence that MUP, when implemented alongside complementary policies, such as BDR and PALIs, is associated with reductions in severe and acute alcohol-related harms, including police-recorded assaults and alcohol-related injury hospitalisations. However, the evidence was null for sexual assault and disentangling the independent contribution of MUP from concurrent interventions is a key limitation across the NT evidence base. While some evidence suggests reductions were observed in certain locations and time periods without concurrent policy changes, attribution remains complex, and there is limited independent evidence that complementary interventions alone produced comparable population-level effects.

Canada

A Canadian interrupted time series study using Alberta as a control found that increases in Saskatchewan's minimum alcohol prices were associated with reductions in alcohol-related crime, particularly traffic-related offences.²⁹ The introduction of graded minimum prices led to an immediate 8% reduction in night time alcohol-related traffic offences among men, with lagged reductions in violent offences observed four to six months after implementation. No immediate effects were detected for disorderly conduct or violence overall.

4.2.3 Modelling studies

Australia

An Australian study³² estimated the impacts of four different pricing policies on a wide range of alcohol-related harms, including violent and assaultive crime, GBFV, non violent crime (including sexual offences and abduction or kidnapping), and workplace absence. Across all four modelled scenarios, reductions were observed primarily driven by decreases among people drinking at harmful levels. Overall, a \$1.50 AUD MUP showed greatest declines across most outcomes and age and gender subgroups, while a uniform excise rate plus a 10% increase was associated with the greatest reductions in alcohol-related crime and workplace absence.

The United Kingdom

Five UK modelling studies^{14, 36-39} consistently predict that MUP would be associated with reductions in alcohol-related harms, with magnitude of effects varying by policy strength, population subgroup and whether MUP is maintained over time.

In Scotland, modelling predict that increasing or uprating the existing 50p MUP would lead to further reductions in alcohol-attributable hospitalisation and mortality, whereas reducing or removing MUP was associated with increases in alcohol-related harm.³⁹ Early UK modelling, in 2010, similarly estimate that introducing a 50p MUP would substantially reduce population-level alcohol consumption and downstream harms, with the largest impacts occurring among lower income groups, while effects for wealthier households were minimal.¹⁴

In England,^{36, 37} modelling indicated that a MUP would reduce alcohol-related harms across England, including alcohol-related deaths, hospital admissions, crime and workplace absence, with particularly large health gains in regions with higher baseline consumption and socio-economic disadvantage, and among heavier drinkers. Modelling indicated that MUP could reduce health inequalities while having modest population-level effects on spending and retailer revenues. Similarly, modelling in Wales showed that increasing the minimum price threshold would further reduce alcohol-related harms and long term mortality, while lowering or removing MUP would increase harm, particularly among heavier drinkers and drinkers from more disadvantaged areas.³⁸

North America

Evidence from two North American modelling studies^{40, 45} was consistent with UK and Australian findings. A Canadian quasi-experimental modelling analysis⁴⁵ found that increases in alcohol minimum prices were associated with reductions in alcohol-related injury presentations during high-risk nighttime periods, including assault and traffic-related injuries, suggesting reduced acute alcohol related harm at the population level. In the USA,⁴⁰ modelling of hypothetical MUP policies for spirits indicated that both tested MUP thresholds would result in reductions in alcohol-attributable deaths, with larger effects observed at higher price points and consistent effects across population subgroups. Overall, North American modelling studies suggest that minimum pricing approaches are likely to produce modest but meaningful reductions in alcohol-related harms, particularly for acute and consumption driven outcomes.

4.3. Potential unintended consequences

4.2.4 Reviews

In the best available review of the evidence to date, a 2025 rapid review found limited literature examining potential unintended negative consequences.²¹ Of the relevant studies found, few investigated unintended consequences as a primary outcome and the majority were qualitative, constraining the strength and generalisability of conclusions. Of nine studies examined, including two Australian,^{35, 46} there was little impact reported on the alcohol consumption and expenditure among people who drink low volumes of alcohol. Displacement of essential spending, such as food purchasing, or increased crime, was not strongly supported by current evidence, with studies generally finding no or only small effects. For example, Scottish studies suggested that where purchasing displacement occurred this shifted to less healthy food choices rather than alcohol, with another study suggesting that people maintained their existing habits to purchase alcohol such as borrowing or reducing spending on utilities. They also found negligible substitution effects, including increased use of non-beverage alcohol or other drugs. While the evidence base to date provides informative data on the experiences of some subgroups, quantitative data is lacking to assess the broader prevalence and population-level significance of these impacts. As such, findings should be interpreted cautiously given the limited evidence base. The potential risks and mitigation strategies for vulnerable groups, including those experiencing socioeconomic disadvantage or severe dependence, remain insufficiently understood and may require ongoing monitoring.

In the PHS-commissioned evaluation of Scotland's MUP,²⁰ some qualitative evidence of negative health and social consequences were reported, particularly for those with alcohol dependence. These included increased withdrawal in homeless and street drinkers, an increase in the consumption of stronger alcohol types and concern about switching from weaker to stronger alcohol drinks. There was no clear evidence of substantial negative impacts on the alcoholic drinks industry, or of social harms at the population level.²⁰

4.2.5 Empirical studies

No additional empirical studies were identified for inclusion in the study, over and above those included in the reviews discussed in 4.2.4.

4.2.6 Modelling studies

Because MUP is designed to target the cheapest alcohol most consumed by the heaviest drinkers, any material impacts on light/moderate drinkers or higher income groups would be unintended. Several Australian and UK modelling studies reported small or negligible changes in alcohol consumption³⁶ or purchasing¹⁴ among light and moderate drinkers and higher-income groups. A 2010 UK study¹⁴ that examined the effect of a 50p per unit MUP on alcohol consumption and household spending patterns across socio demographic groups, found impacts on wealthier households were minimal, while some displacement of spending from food to alcohol was observed among affected groups. Overall, effects for light or moderate drinkers were small or negligible.

5. Discussion

This review aims to explore the effects associated with a MUP for alcohol use, alcohol-related harms and potential unintended consequences, with a focus on Australia and comparable international jurisdictions. This was achieved by synthesising evidence from six review studies published in the last 15 years alongside empirical and modelling studies not otherwise captured in previous reviews. Across the reviews, there was substantial alignment in the direction of effects consistently associated with MUP, particularly for reductions in alcohol consumption and selected alcohol-related harms, although differences were evident in the outcomes prioritised, data sources used and populations examined.^{1, 18, 21}

In interpreting the overall evidence, greater weight is given to real-world quasi-experimental studies using objective outcomes (e.g. sales, hospital and police data), as these provide the strongest basis for causal inference. Modelling studies are considered complementary, offering insight into the size and direction of expected impacts under alternative policy scenarios, while findings from self-report surveys and qualitative studies are interpreted more cautiously due to higher risk of bias and limitations in capturing changes among the heaviest drinkers and marginalised subgroups.^{20, 21} Overall, the strength of evidence is moderate to strong, with highest confidence from quasi-experimental studies using objective outcomes.

Alcohol consumption

Across the evidence base, the most robust evidence for changes in alcohol consumption comes from quasi-experimental evaluations using objective sales or wholesale supply data, a conclusion consistently supported by review level findings.^{1, 20}

Reviews synthesising natural experiment and sales data (particularly from Scotland) reported modest but statistically detectable reductions in per adult off trade alcohol sales following MUP, with little evidence of compensatory increases in on trade sales.^{20, 27, 28} Reductions were concentrated in beverage categories most exposed to the price floor (notably cider/perry and spirits), consistent with the policy's mechanism of raising the price of the cheapest units of alcohol.^{27, 28} In Australia, early evaluations of the NT \$1.30 MUP similarly showed substantial reductions in the cheapest products (particularly cask wine) and declines in wholesale supply for some beverage categories.^{22, 46} While reviews noted that the Scottish evidence benefits from cleaner counterfactual comparisons and fewer concurrent policy changes, the direction of findings from the NT was considered broadly consistent with international evidence.^{1, 21}

Modelling studies are highly consistent with both the primary studies and the conclusions of reviews, predicting that impacts on consumption are concentrated among people who drink heavily and those who purchase cheaper alcohol, with smaller average effects at population level.^{30, 36, 37}

Australian models suggest that stronger floor prices (approximately \$1.00–\$1.50 per standard drink) yield more policy-relevant reductions,^{30, 32} while UK and North American modelling similarly shows that higher or uprated MUP levels strengthen effects, and that weakening or removing the policy increases consumption and harms.^{38, 39} Reviews drawing more heavily on self-report survey data reported more variable findings, particularly among people with alcohol dependence, a pattern likely reflecting known limitations of survey designs in capturing heavy drinking and marginalised populations rather than substantive disagreement about policy impact.^{18, 21}

Taken together, objective empirical evidence and modelling supports the interpretation that MUP reduces consumption primarily by targeting the cheapest alcohol, with the magnitude of effect dependent on the level and maintenance of the price floor.^{1, 20} MUP is therefore likely to be an effective population level lever for reducing alcohol consumption in Australia, particularly among higher risk drinkers, provided the minimum price is set at a meaningful level and maintained over time.^{30, 32} It is also important to note that several modelling studies rely on older baseline consumption and price data (e.g. from the early 2010s), and price thresholds are not always adjusted for inflation, which may influence the estimated magnitude and contemporary relevance of policy effects.

Alcohol-related harms

A similar pattern emerges for alcohol-related harms, reflecting conclusions drawn across multiple reviews.¹⁹⁻²¹

Reviews focusing on morbidity and mortality outcomes consistently concluded that MUP is associated with reductions in alcohol-attributable harm, particularly for outcomes linked to chronic heavy drinking, while noting that effects may emerge over time.^{19, 20} Scotland offers the clearest quasi-experimental evidence, with reported reductions in wholly alcohol-attributable deaths and some hospital outcomes, and patterns indicating greater benefits in populations from more vulnerable areas and for chronic health conditions.^{20, 28} It is important to note that the Scottish evaluations are strengthened by the use of comparison areas (England and Wales), where MUP was not introduced and where no other major alcohol supply reduction policies were implemented at the same time.

Reviews and Canadian primary study evidence also suggests reductions in some crime outcomes following minimum price increases.^{21, 29} In Australia, multiple studies from the NT reported reductions in police-recorded alcohol-related assaults and signals of improvement in certain health outcomes, although both reviews and primary studies highlighted that attribution is more uncertain due to concurrent policy changes (BDR and PALIs), COVID-related disruptions and a lack of clean comparator sites.²¹⁻²³

Modelling studies reinforce these patterns, consistently projecting downstream reductions in mortality, hospital admissions, crime and workplace impacts, with larger effects at higher minimum prices and among people drinking at harmful levels.^{32, 37, 39}

Reviews addressing equity and distributional impacts noted that MUP is likely to reduce health inequalities by preferentially increasing the price of cheap alcohol, although the magnitude of differential effects varied across studies and data sources.^{18, 21}

Qualitative and self-report evidence provides valuable contextual insight into how MUP may influence drinking behaviour and for whom, including perceived impacts on purchasing decisions and consumption practices.^{20, 22} However, these data are less reliable for estimating population-level effects due to well recognised limitations, including recall bias, limited representativeness, and difficulties capturing sustained changes among heavier and marginalised drinkers.²¹

Overall, there is strong alignment between review-level conclusions, modelling projections and empirical evidence on the direction of impact, with variation in the strength of causal inference across jurisdictions.^{1, 19}

Unintended consequences

Evidence on unintended consequences is more limited, a limitation acknowledged in reviews.²¹

Objective data do not indicate clear large-scale adverse effects; for example, Scottish sales data do not show displacement to on trade purchasing,²⁰ and Australian NT routine data do not demonstrate widespread population-level harms attributable to MUP.²² Importantly, concerns that MUP could lead to increased alcohol withdrawal or place additional strain on treatment services are not supported by current evidence, with both qualitative and quantitative Scottish studies indicating stable or reduced withdrawal-related presentations.²¹ However, reviews also note that many hypothesised unintended outcomes, such as illicit supply or non beverage alcohol use, are not well captured in routine datasets.²¹

Modelling studies generally predict minimal impacts on light and moderate drinkers and small average financial effects, with larger impacts concentrated among the heaviest purchasers, a finding consistent with review level conclusions.^{31, 39} These studies also highlight an important design trade off: MUP targets the cheapest alcohol more directly than broad tax increases, but its effectiveness depends on setting and maintaining an adequate price floor.^{38, 39}

Qualitative evidence raises some concerns for vulnerable subgroups, including people with severe dependence, low-income groups, and Aboriginal and Torres Strait Islander peoples, with reports of product switching, financial strain and potential unintended coping behaviours.²¹ While these concerns are not strongly supported at the population level, the most recent review of evidence emphasises the importance of implementation context and targeted mitigation strategies to avoid exacerbating existing health inequities.²¹

5.1 Implications and future research directions

Across reviews, empirical and modelling studies, the evidence indicates that MUP is most likely to deliver meaningful public health benefits when it is designed to target the cheapest alcohol and maintained in real terms over time through adjustment with inflation.^{1, 39}

The greatest reductions in alcohol consumption and alcohol related-harms consistently occur among people who drink heavily and populations experiencing poverty, social marginalisation or alcohol use disorder. As such it has the potential to both reduce harm and existing health inequities.²¹ These findings support MUP as an effective population-level policy lever, particularly when implemented at a sufficiently high threshold and alongside mechanisms to prevent erosion of impact through inflation.^{30, 38} This is reflected in recent policy developments, including Scotland's decision to uprate its MUP from 50p to 65p per unit in 2024⁴⁷ and Wales' planned increase to the same level in October 2026.⁴⁸

At the same time, the evidence suggests that the impact of MUP could be enhanced by tailored programs for some population subgroups. Reviews and qualitative studies highlight the importance of complementary interventions, such as Managed Alcohol Programs (MAPs), targeted treatment access, and financial or social supports for low-income individuals to mitigate potential adverse effects and support people with severe dependence or complex needs.²¹ Incorporating such measures within MUP policy frameworks may improve acceptability, mitigate risks for vulnerable groups, and maximise net public health gains.

Future research should prioritise longer-term evaluations that examine the effects of MUP in combination with existing alcohol control policies, reflecting more realistic and 'holistic' policy environments such as those observed in the NT.¹⁹ There is a particular need for studies that assess sustained impacts on chronic harm outcomes, equity and social determinants of health, and broader life course outcomes for vulnerable populations, including housing stability, service engagement and social mobility.²¹ Strengthening the evidence base in these areas will support more informed decisions about optimal policy design, implementation and integration of MUP within comprehensive alcohol harm reduction strategies.

5.2 Strengths and limitations

This review has several important strengths.

First, it employed a comprehensive and systematic search strategy that captured a broad range of peer-reviewed and grey literature published over the last 15 years, enabling synthesis of a diverse and evolving evidence base. Mapping single studies against the included reviews allowed areas of overlap and omission to be identified and informed the use of an umbrella review supplemented by a synthesis of previous uncaptured empirical and modelling studies. This approach improved coverage of more recent and under-represented evidence, particularly from Australia and Canada. In addition, the inclusion of international studies from jurisdictions comparable to Australia strengthened the relevance of the findings by drawing on real-world policy evaluations.

A further strength is the emphasis placed on higher-quality non-randomised study designs. The review prioritised quasi-experimental studies using objective outcomes such as alcohol sales, hospitalisations and police-recorded harms, which provide the strongest basis for causal inference when randomised controlled trials are not feasible. Modelling studies were included as complementary evidence to explore impacts under alternative policy scenarios, while qualitative and self-report studies were used to contextualise findings. The consideration of a broad range of outcomes across alcohol consumption, health harms, crime and potential unintended consequences further enhances the policy relevance of the review. Selection bias was also minimised by including all studies that met eligibility criteria regardless of critical appraisal outcome (which was not carried out for this review).

As with any rapid review, several limitations should be acknowledged.

The structure of the underlying evidence base constrains interpretation, as many existing reviews include a common core set of Scottish modelling studies and natural experiments, often produced by the same research groups. As a result, consistency across reviews does not necessarily reflect independent replication of findings. Although the supplementary synthesis addressed gaps in review coverage, some relevant studies may still have been missed due to limits on jurisdictions, language and publication period. The review was also limited to comparable high-income jurisdictions; however, this is unlikely to have resulted in the exclusion of meaningful evidence given the focus on policy transferability to the Australian context. Evidence from other settings, such as Eastern European countries (e.g. Armenia and Russia), is less directly comparable due to differences in policy design, implementation and regulatory context. In these settings, MUP is often restricted to specific drink categories (e.g. vodka), and has been introduced alongside multiple policy measures.^{49, 50} In addition, qualitative primary studies were excluded from the synthesis unless they were already captured within included reviews. While this may have limited the ability to examine some nuanced or subgroup specific unintended consequences, the impact of this exclusion is unlikely to be material given the inclusion of a 2025 comprehensive review, which specifically focused on these outcomes.

Interpretation of findings is further constrained by heterogeneity across included studies in outcomes measured, follow-up periods, data sources and analytical approaches, which precluded meta-synthesis and necessitated a narrative approach. In Australia, attribution of observed effects to MUP is particularly challenging due to the concurrent implementation of other alcohol control measures and disruptions associated with COVID-19. Qualitative and self-report evidence (from included review studies) provides valuable contextual insight but is less reliable for estimating population-level effects due to recall bias, limited representativeness and difficulties capturing sustained changes among the heaviest drinkers and marginalised populations. Modelling studies are informative but rely on assumptions about behavioural responses and data inputs that may not fully reflect real-world conditions. These limitations highlight the need for cautious interpretation, particularly when translating findings across different policy contexts.

6. Conclusion and implications

This review finds consistent evidence that MUP reduces purchases of the cheapest alcohol and is associated with meaningful reductions in selected alcohol-related harms, particularly those driven by heavy drinking.

Quasi-experimental studies using objective outcomes provide the strongest support, most clearly from Scotland, with convergent evidence from the NT despite a more complex policy environment. Modelling studies indicate that benefits increase with higher and well-maintained, inflation-adjusted price thresholds. Although limitations remain in the evidence base, particularly around attribution, long-term impacts and measurement of unintended consequences, the overall body of evidence supports MUP as an effective population-level alcohol control policy. The greatest benefits are observed among people who drink heavily and populations experiencing socioeconomic disadvantage, suggesting that MUP has the potential to address health inequities.

With appropriate policy design including complementary supports for vulnerable groups and other alcohol control policies, MUP has strong potential to contribute to sustained reductions in alcohol-related harm in Australia.

Appendices

Appendix 1: Summary of findings tables

Table 1: Summary of included reviews (n = 6)

Author, Year, Country, Study design (no. of included studies)	Aim	Countries included	Outcomes investigated	Quality Assessment	Findings	Conclusions	Limitations
Boniface et al. (2017), UK¹ Systematic review (33)	To assess the evidence for price-based alcohol policy interventions using the Bradford Hill Criteria for causation to determine whether MUP is likely to be effective	Australia, Canada, UK, Ireland, Scotland, Russia, Finland	- Alcohol use - ED visits / hospitalisations - Mortality - Alcohol purchasing	EPHPP tool for quantitative studies. Quality assessment of individual studies not provided; only broad scores presented (3 weak, 8 moderate, 15 strong); CASP tool for qualitative study and systematic reviews	Results were presented with respect to the Bradford Hill Criteria for causality: - Strength of association: reasonably good support - Consistency: very strong support - Specificity: very strong support - Temporality: very strong support - Dose-response/biological gradient: strong support, although relationship difficult to quantify - Plausibility: strong support - Coherence: strong support - Experiment: tentative support - Analogy: very strong support	- Highly probable, but not definite, that introducing MUP would reduce alcohol consumption and alcohol-related harms - Since not feasible to conduct RCTs of MUP, synthesis of evidence according to the Bradford Hill Criteria results is of value	- EPHPP tool not able to be used for grey literature studies and challenging for modelling studies - Authors couldn't assess publication bias but did exclude studies with a conflict of interest - Study types varied, so no meta-analysis possible
Clay et al. (2025), Canada²¹ Rapid systematic review (35)	To conduct a rapid review on the impact of minimum pricing on vulnerable populations and health equity	Australia, Canada, Ireland, Scotland, Wales, Russia	- Alcohol use - ED visits / hospitalisations - MV / traffic offences - Financial - Housing insecurity - Use of other drugs or alcoholic beverages - Experiences after MUP	No	- Minimum pricing reduces consumption among people who drink heavily and those in lower socio-economic groups, leading to disproportionate declines in alcohol-related mortality, hospitalisations, and conditions such as liver disease - Greatest health gains are among populations experiencing poverty, social marginalisation, or alcohol use disorder - People who drink at low volumes minimally affected, and substitution effects - such as increased use of non-beverage alcohol or other drugs - were negligible	- Concerns about other unintended consequences, including displacement of essential spending or increased crime, are not strongly supported by current evidence - MUP is a public health strategy that both reduces alcohol-related harm and advances health equity - Further research should examine long-term effects on vulnerable populations and broader outcomes, such as social mobility	- Excluded grey literature - One reviewer - Publication bias not assessed - No critical appraisal conducted - Variability in study designs, jurisdictions and policy parameters reduced comparability of findings

Kilian et al. (2023), Canada¹⁸ Systematic review & meta-analysis (10, 5 included in meta-analysis)	To estimate the effects of alcohol taxation, pricing policies, and restricted temporal availability on overall alcohol consumption and review their differential impact across sociodemographic groups	Australia, Scotland, Wales	• Alcohol use	Newcastle Ottawa Scale for quality of non-randomised studies.	• A meta-analysis of 5 studies suggested that introducing minimum pricing (Int\$ 0.90/10 g of pure alcohol) reduced consumption by 10% (95% PI: -28.2%, 5.8%) • Pricing policies resulted in greater changes in alcohol consumption among low-income drinkers, while results were inconclusive for other socioeconomic indicators, gender, and racial and ethnic groups	• MUP contributes to decline in consumption levels and alcohol-attributable harm • Research needed on the differential impact of alcohol policies, particularly for groups bearing a disproportionate alcohol-attributable health burden	• Small number of studies for meta-analysis, high level of uncertainty • The data for meta-analysis uses an absolute threshold in international dollars, based only on high-income countries limiting generalisability
Maharaj et al. (2023), Ireland¹⁹ Systematic review (22)	To determine the impact of MUP on the primary outcome of alcohol-related hospitalisation, and secondary outcomes of length of stay, hospital mortality and alcohol-related liver disease in hospital. The Bradford Hill Criteria were used to infer causality for outcome measures	Australia, Canada, UK, Ireland, Scotland, Wales, Northern Ireland, South Africa	• ED visits / hospitalisations • Mortality	EPHPP tool	• Modelling studies estimated that MUP could reduce alcohol-related admissions by 3-10% annually • Real-world studies demonstrated that acute alcohol-related admissions responded immediately and reduced by 2-9%, and chronic alcohol-related admissions lagged by 2-3 years and reduced by 4-9% annually • Using the Bradford Hill Criteria, a 'moderate-to-strong' inferred causal link that MUP could reduce alcohol-related hospitalisation	• Majority of empirical studies are consistent with modelling studies that suggest minimum pricing strategies could reduce alcohol-related healthcare burden • Minimum pricing could target the heaviest consumers from the most deprived areas who are at greatest risk of alcohol harms and has potential to reduce health inequalities • Further research needed to understand the interactions between minimum pricing in combination with existing alcohol policies	Study types varied, so no meta-analysis possible

Patterson et al. (2023), Scotland⁵¹ Narrative review (40)	To evaluate the impact of MUP in Scotland (which was 50p per unit) through evidence synthesis	Scotland	Alcohol use ED visits / hospitalisations Use of other drugs or alcoholic beverages	EPHPP tool for quantitative, CASP for qualitative, SCRIBE for two studies not appropriate for first two tools Five studies rated as weak excluded from analysis Independent authors conducted critical appraisal	• Strong evidence MUP reduced deaths and hospital admissions driven by reduction in chronic causes • Small increase in acute deaths from intoxication • No consistent evidence MUP impacts ambulance callouts, ED attendances and medication prescribing • No consistent evidence of positive or negative impacts on social outcomes • MUP impacted price of ciders and spirits the most • Some qualitative evidence of negative health and social consequences. Men and those living in most deprived areas more positively affected • Total alcohol sales reduced by 3%, households that purchased most alcohol reduced purchasing	• MUP had a positive impact on health outcomes, particularly in men and those living in the most deprived areas and therefore contributes to addressing alcohol-related health inequalities • No clear evidence of substantial negative impacts on the alcoholic drinks industry, or of social harms at the population level	• Authors also conducted many of the studies included in the review
Sharma & Vandenberg (2017), Australia³³ Literature Review (7)	To summarise the findings of recent meta-analyses and systematic reviews on the estimated effect of taxes and prices on alcohol consumption in the last 10 years, evaluating alcohol tax/pricing policies such as MUP across UK, Canada and Australia	Australia, Canada, UK	• Adult alcohol use	No	• Price increases consistently lead to reductions in alcohol consumption, though the magnitude of price effects varies by subgroup and alcoholic beverage type • Lack of consensus on the most appropriate taxation and pricing policy in many countries, because of effects by different consumption and income level and disagreement on policy design by parts of industry	• Future research should obtain accurate alcohol price data, reduce bias in estimating price responsiveness and examine impact on heaviest drinkers	• No reporting on inclusion/exclusion criteria - open to author and reporting bias • No quality appraisal

Table 2: Summary of included empirical studies (n =8)

Author, Year, Country, Study design	Aim of study	Population	Outcomes	Findings	Conclusions	Limitations
Chen et al. (2025), Australia²⁵ Retrospective time series	Investigate the influence of alcohol policies on alcohol-related injury (ARI) hospitalisations in the NT	6 acute care public hospitals in the Northern Territory (n=36,469 hospitalisations)	Alcohol-related injury hospitalisations	• Main ARI causes: assault (46%), falls (20%), intentional self-harm (9%); patterns varied by Aboriginal status and gender • ARI rate 3.8× higher in Central Australia vs Top End (p<.001) • Alcohol involved in 22.6% of all injury hospitalisations • ARI rates exceeded national estimates for Aboriginal (2,868/100k) and non Aboriginal (250/100k) populations • Central Australia: +5.2%/yr (2007–17), then -12.2%/yr (2017–22), temporally aligned with BDR v2, MUP and PALLs. • Top End: +10.1%/yr (2007–20), then -26.1%/yr (2020–22; not significant), likely influenced by COVID restrictions	• Alcohol policies implemented in 2017–2018 were associated with reduced ARI hospitalisations in Central Australia • Policies associated with reduced harm should be sustained	• Cannot determine whether alcohol use preceded/caused injuries • Could not distinguish victim vs perpetrator in ARI presentations • Hospitalisations capture more severe injuries only • Potential under-recording of alcohol involvement in ED/hospital data • Potential overestimation among Aboriginal populations due to access/transport/accommodation factors influencing admissions • Other community-based interventions were out of scope

Clifford et al. (2024a), Australia²⁴ Time series	Examine the impact of BDR, MUP and PALIs in 3 regional NT towns and restrictions on daily purchases/opening hours (DPOH) in one regional NT town on adult domestic and family violence	Residents of NT, Greater Darwin, Katherine, Tennant Creek and Alice Springs that reported adult domestic and family violence to police (Jan 2014 -Feb 2020)	Gender-based family violence	- Alcohol involved in 70% of assaults and 69% of breaches (offender-only, victim-only, or both) - Post MUP: NT-wide immediate decreases in assaults (-11%), alcohol involved assaults (-21%) and alcohol involved breaches (-21%); no significant changes in Greater Darwin, Katherine or Tennant Creek. Including PALIs: larger decreases in assaults (-33%), breaches (-42%) and alcohol involved breaches (-57%)	- Observed decreases in DFV indicators were more likely driven by PALIs than MUP - MUP may have greater effects on outcomes such as consumption and hospitalisations than on assaults/crime	- Police data underestimate DFV (not all incidents reported/captured) - Difficult to isolate MUP effects from concurrent policies (BDR, PALIs, DPOH) and timing differences - Small population limits statistical power to detect effects
Clifford et al. (2024b), Australia⁴⁴ Time series	Estimate impacts of 3 major alcohol policies - Banned Drinker Register (BDR), MUP and Police Auxiliary Liquor Inspectors (PALIs) - on adult sexual assault across the NT and in Greater Darwin	NT residents from 4 locations (Darwin, Katherine, Tennant Creek, Alice Springs) Policy impact was observed from Jan 2014 to Feb 2020	Violence / violent crime; assault (non-domestic); DFV; adult sexual assault	- NT adult sexual assault victimisation rate: 105 per 100,000 (2020) and stable across the study period - Alcohol involved in 40% of adult sexual assaults (offender-only 13%, victim-only 7%, both 20%) - No association between BDR/MUP and police-recorded adult sexual assaults across the NT	- Adult sexual assault rates are high in the NT - BDR and MUP were not associated with changes in police-recorded adult sexual assaults in the NT or Greater Darwin - Further work is needed to develop and evaluate interventions to reduce alcohol-involved adult sexual assault in the NT	- Sexual assault is underreported (e.g. anonymity, service access, social repercussions), especially in rural/remote NT - Alcohol may affect judgement/memory and classification/recording of sexual assault - Multiple concurrent policies (BDR, MUP, etc.) make it difficult to attribute effects to a single intervention

Coomber et al. (2020), Australia²² Mixed methods	Assess early impact of introducing MUP on alcohol consumption, alcohol-related harms, and related indicators in the NT	Residents from 5 Northern Territory regional locations (NT total, Darwin and Palmerston, Alice Springs, Katherine, Tennant Creek)	Violence / violent crime; assault (non-domestic); DFV; emergency presentations and hospitalisations; motor vehicle crashes; adult alcohol use; child or adolescent use of or exposure to alcohol; other: protective custody episodes, school attendance, tourism, licensing and wholesale alcohol supply	• NT-wide: declines in wholesale alcohol supply per capita (total, cask, bottled wine, mid strength beer); increases in fortified wine • NT-wide: decreases in alcohol-related assaults, protective custody, ambulance attendances, ED presentations, road traffic crashes and child protection cases • Darwin/Palmerston: cask wine and cider supply ↓; small increases in fortified wine and spirits; assaults/protective custody/ambulance attendances ↓; hospital admissions ↓ (not significant); other substance-use admissions rose initially then declined • Alice Springs: total sales ↓ (bottled wine, mid strength beer) with full strength beer ↑; most harm indicators ↓ (assaults, protective custody, ambulance, ED presentations, hospital admissions, sobering up shelter • Katherine: cask/bottled wine supply ↓; light beer ↑; assaults, ambulance attendances and admissions ↓ • Tennant Creek: mid strength beer supply ↑; ambulance attendances and ED presentations ↓. NDSHS: heavy episodic drinking ↑ (not significant) in Darwin and ↓ (not significant) elsewhere	• Within one year, MUP reduced sales of cheap alcohol (notably cask wine) in multiple NT towns • Moderate drinking patterns showed little change; many beverages were already priced above the threshold • MUP complemented BDR/PALIs and coincided with reductions in alcohol-related harm in Darwin and other regions	• NDSHS limitations for regional comparisons (remote/regional NT under-captured; some estimates too imprecise • Unable to draw robust explanations from some data sources; authors note this as a future research opportunity
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Giles et al. (2024), UK²⁸ Time series	Evaluate impact of MUP policy introduced in Scotland on May 1, 2018, 3 years post-implementation across a range of outcomes that will inform MUP continuation beyond its sixth year	N/A. Alcohol retail sales data was used to estimate weekly alcohol consumption at a population level	Adult alcohol use; other: per adult alcohol sales (as a proxy for alcohol use)	• MUP associated with a 3% reduction in total per adult alcohol sales in Scotland vs England/Wales over 3 years (95% CI 1.8–4.2; $p < .001$) • Reduction driven by a 3.6% net decline in off trade sales; no evidence of change in on trade sales • Largest net reductions for cider/perry, then beer and spirits; little change for wine/RTDs; fortified wine increased	• MUP reduced population-level alcohol sales in Scotland over 3 years post implementation • Findings support a positive effect of MUP on alcohol-related harms	• Retail sales data cannot be disaggregated to assess subgroup impacts • Cannot assess low vs high income household differences using retail data • Potential errors in smaller retailer data (e.g. ALDI, Lidl)
Miller et al. (2023), Australia²³ Interrupted time series	Examine short-term impact of MUP in police-recorded alcohol-related assaults (domestic and non-domestic) across the NT, Australia	Residents across NT and within 4 small regions: Darwin/Palmerston (123,344) Alice Springs (26,534) Katherine (10,718) Tennant Creek (3,252)	Assault (non-domestic); DFV	• Darwin/Palmerston: alcohol-related assault offences –14% per 10,000 people • Alice Springs: alcohol-related assaults –44%; authors note attribution likely relates to PALIs and prior local floor price • Katherine: gradual reduction in assault rates (~–4% per month)	• MUP introduction was associated with reductions in alcohol-related assaults in some NT regions (notably Darwin/Palmerston) • Further research is needed to assess whether trends are maintained long term	• MUP coincided with other policies (BDR, PALIs) in some regions; cumulative effects likely • Domestic vs non-domestic assaults not reported separately • Lower intoxication levels were difficult to capture in police records • Police report reliability issues (e.g. confidence in intoxication reporting) • Assault underreporting may underestimate harm
Robinson et al. (2021), UK²⁷ Interrupted time series	Examine impact of the MUP in Scotland on off-trade alcohol sales one-year post-implementation	The populations of Scotland aged ≥ 16 years (intervention) and England and Wales (control)	Adult alcohol use	• MUP (May 2018) associated with a 2% reduction in off trade alcohol sales per adult in Scotland over 12 months • In England/Wales (no MUP), per adult alcohol sales increased over the same period • Adjusted models estimated a 3.5% net reduction in off trade sales in Scotland vs England/Wales; driven by reduced cider, perry and spirits sales	MUP implementation was associated with reduced off trade alcohol sales in Scotland in the first year	• Sales data cannot be disaggregated to examine subgroup impacts • Heavier drinkers most affected are those buying the most affected categories (cider, perry, spirits) • One-year follow-up only (short-term effects)

Stockwell et al. (2017), Canada²⁹ Interrupted time series	Assess impacts of changes to Saskatchewan's minimum alcohol pricing regulations between 2008-12 on crime events related to alcohol use	The populations in Saskatchewan (intervention) and Alberta (control) on 1 July for each of the 7 years of the study	Violence / violent crime; motor vehicle crashes; drink driving offences; other: disorderly conduct, "traffic offences"	• Immediate 8% decrease in night time alcohol-related traffic offences in men (not women) • No significant immediate changes for non alcohol traffic offences, disorderly conduct or violence • Lagged reductions in violent offences for men (-19.7% at month 4 to -18.2% at month 6)	• Minimum pricing was associated with reductions in some alcohol-related crime outcomes • Minimum prices may contribute to reduced traffic-related and violent crimes among men	• Outcomes may be influenced by unmeasured factors (residual confounding), though a control jurisdiction was used • Police data limitations (not all crimes reported/detected; sensitive to enforcement changes)
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Table 3: Summary of modelling studies (n = 10)

Author, Year, Country	Aim of study	Population and data sources	Minimum price point	Outcomes	Findings	Conclusion	Limitations
Angus et al. (2023), Scotland³⁹	Model impacts of changing Scotland's 50p MUP (incl. uprating) and equivalent duty changes	Synthetic population generated from Scottish Health Survey (SHeS) data, a sample that is representative of the Scottish population ≥ 18 years; alcohol consumption - SHeS data; hospital admissions data - Public Health Scotland; data of the baseline (2019) distribution of prices paid for alcohol - Living Cost and Food Survey (LCFS)	50p/unit and alternative thresholds	- Alcohol use - ED visits / hospitalisations - Mortality - Financial	50p MUP (2018): consumption fell; hazardous/harmful drinkers (esp. lower SES) still buy more cheap alcohol - Raising MUP (2019): further ↓ consumption, spending, harms (incl. deaths, admissions, YLL, NHS costs); larger effects at higher thresholds. Lowering/removing: ↑ harms and NHS costs - MUP vs duty: 50p→60p ≈ 21–28% duty rise; MUP targets cheap off trade, duty affects all products; MUP reduces harmful drinkers more (-18.5% vs max -14.2% with duty) - Not indexing to inflation: ↑ consumption (esp. harmful drinkers); +1,055 deaths/20y vs uprating	The report recommends that jurisdictions with MUP (or considering it) adopt an uprating mechanism so the policy continues to deliver intended outcomes	- COVID-19 confounding - Uses narrower alcohol-attributable coding (may underestimate admissions vs prior SAPM) - Did not separately model income/affordability change - Assumes uniform inflation across products
Arnoult & Tiffin (2010), England¹⁴	Estimate how alcohol price rises affect alcohol spend/consumption and food spending by subgroup	UK Expenditure and Food Survey (EFS) 2005-2006	50p p/unit	- Alcohol use - Financial	50p/unit: predicted ~15% ↓ consumption (UK). Mainly affects off licence (on trade already above threshold) - Some spending shifts from food → alcohol - Larger effects in lower income/ low SES groups; minimal impact in higher income groups	- A 50p/unit minimum price would mainly affect off trade outlets and lower income groups, with little effect on higher income households - It is unclear whether consumer preferences would shift towards on trade purchase - Further research should test whether cheaper units generate similar health harms as higher priced units	- Household-level (not individual) data 2 week diary may not reflect typical intake - Limited ability to classify risky vs non risky drinking

Bertin et al. (2024), USA⁴⁰	Model effects of hypothetical spirits MUP in Michigan on sales, consumption, and alcohol-attributable deaths	Respondents in Michigan 2020 (n=7,269). Baseline off-premise distilled spirits available in Michigan 2020 = 10,866 (9,747 included in final sample); International Model of Alcohol Harms and Policies (tool) (InterMAHP); Behavioural Risk Factor Surveillance System (survey) (BRFSS). Estimates for measuring drinking based on the National Survey on Drug Use and Health (measurement) (NSDUH)	Two hypothetical MUP scenarios - 40 cent and 45 cent p/standard drink (USD)	- Alcohol sales - Alcohol use - Mortality	40c/45c MUP (spirits): price ↑ ~6c/13c for cheapest products; predicted ↓ spirits consumption 2.6%/3.9% and ↓ alcohol-attributable deaths ~5% (232)/~8% (354) per year (Michigan, 2020) - Some substitution to beer/wine assumed	- MUP could reduce spirits sales/consumption and alcohol attributable deaths; small price increases for the cheapest products may save hundreds of lives annually - The study positions MUP as a WHO recommended public health measure	- No exact price data for off premise sales - COVID effects uncertain - Limited generalisability beyond Michigan - Does not model taxes/promotions - Possible undercount of harms in ≥65y (former drinkers)
Brennan et al. (2023), England³⁷	Compare effectiveness of local/regional vs national MUP implementation in England (modelled)	Health Survey for England (HSE) data 2011-13 (n=24 685); alcohol consumption - HSE data; prices paid for alcohol: Living Costs and Food Survey (LCFS) 2-week purchasing diary (n = 10,065 having 57,581 alcohol transactions from 2012-14); Mortality, hospitalisation and crime data: Office for National Statistics (ONS)	50p MUP p/unit	- Alcohol use - ED visits / hospitalisations - Mortality - Crime - Consumer spending - Retailers' revenue - National health service costs - Health inequalities	50p/unit MUP (England): largest gains modelled in northern regions (higher baseline harm) - Estimated annual impacts (North East): deaths -17.4%, admissions -7.9%, crime -3.5% - Higher risk drinkers: up to ~6 units/week ↓ (~-7.7%) - Off trade revenue ↑ on trade revenue slight ↓ - NHS costs and inequalities ↓ - Sensitivity: 0.30p ≈ ~10% of 0.50p mortality effect; 0.40p ≈ ~50%; 0.60p ~1.8x; 0.70p ~3x	Local MUP would likely be most effective in northern England, where consumption and harms are higher than the national average	- Inputs drawn from multiple sources (no single dataset) - Cross border purchasing not modelled - Regional focus may limit generalisability

Jiang et al. (2020), Australia³⁰	Model impacts of 8 alcohol pricing policies on consumption across Australian subgroups (age, income, drinking pattern)	1,789 Australians (aged 16+); 2013 Australian International Alcohol Control Study	3 relevant scenarios: 1) MUP at \$1 p/ standard drink; 2) MUP at \$1.30 p/ standard drink; 3) MUP at \$1.50 p/ standard drink	Alcohol use	- MUP \$1.30–\$1.50: predicted ↓ consumption, greatest among high risk, lower income and older drinkers (more cheap alcohol) - Smaller effects for moderate drinkers and higher income groups	- MUP effects vary across subgroups, but models predict overall reductions in alcohol consumption in Australia - Reductions are larger for harmful and low income drinkers than for moderate drinkers	- Self report/recall bias (consumption, prices) - Small sample in key strata (e.g. 16–24y) → combined groups - Mean price assumptions (not exact) - Jurisdictional price variation
Marzan et al. (2024), Australia³²	Model effects of 4 tax/MUP options on alcohol use and selected social harms in Australia (by age/sex)	Australian National Drug Strategy Household Survey (NDSHS) 2019 – response rate of 49% and 22,015 respondents; alcohol consumption: NDSHS 2019; antisocial behaviours and sickness presenteeism: combined waves of NDSHS 2013 and 2016; crime: NSW Bureau of Crime Statistics and Research (BOCSAR)	2 relevant scenarios: 1) MUP at \$1.30 p/ standard drink; 2) MUP at \$1.50 p/ standard drink	- Alcohol use - Crime - Gender-based family violence - Workplace absence	- All pricing options: ↓ mean consumption (mainly via fewer harmful drinkers) - Uniform Excise Rates +10%: greatest ↓ crime and workplace harms; shifted some hazardous drinking (men 16–34, women 35–54) - MUP \$1.50: largest declines across most outcomes and age/sex groups; also largest ↓ sickness absence/presenteeism	- All four options modelled could reduce workplace harms and police recorded crime versus current tax settings - Alcohol pricing can reduce alcohol attributable social harms as part of a broader policy package - Replacing wine excise tax with a uniform excise and/or MUP may substantially reduce harms and supports more consistent national pricing policy	- Self report bias - NDSHS underestimates vs sales - Uncertainty in risk functions/baselines (e.g. assuming all flagged crime is alcohol attributable) - Police data undercounts crime - Some labour force inputs (unemployment) may be inaccurate - Uses NHMRC 2009 guidelines
Meng et al. (2013), England³⁶	Model effects of introducing MUP in England using the Sheffield Alcohol Policy Model (SAPM)	Population of England; on-trade sales data – Neilsen/CGA; off-trade sales data – Living Cost and Food Survey (LCF); alcohol consumption – General Lifestyle Survey (GLF) by self-report for ≥16 yrs	MUP 45p per unit of alcohol (1 unit = 8g/10ml of ethanol)	- Alcohol use - ED visits / hospitalisations - Mortality - Crime - Workplace absence	45p MUP (England): overall consumption –1.6% (~–11.7 units/drinker/year); 40p –1.0%, 50p –2.5% - Largest consumption ↓ in harmful drinkers (~–3.7%), esp. low income harmful (~–7.5%) - Modelled harms ↓: deaths –123 (yr1) and –624/year (from yr10); morbidity –12,500 illnesses and –23,700 admissions/year; crime –34,200 offences; workplace absence –247,600 days/year - Total value ~£3.4bn/10y	- MUP would reduce consumption, alcohol-related harms (deaths, admissions, crime, workplace absence) and associated costs - Impacts are small for moderate drinkers and largest for harmful drinkers - Effects are larger for low income harmful drinkers than higher income harmful drinkers, though both are affected	- May under/over estimate harms by income group - No individual level UK purchasing panel data - Assumes similar lags for morbidity vs mortality (unlikely for some conditions)

Morris et al. (2025), Wales³⁸	Model Wales options for minimum price: raise (55–80p), lower (40–45p), or remove	Population of Wales; 2022/23 National Survey for Wales data - UK Data Service; hospital admission data 2022 - Digital Health and Care Wales	50p/unit of alcohol (10ml / 8g of ethanol)	• Alcohol use • ED visits / hospitalisations • Mortality • Financial	• Wales MPA: raising 50p→55–80p predicted ↓ harmful/hazardous drinking and ↓ deaths/admissions/YLL • Lowering 40–45p or removing predicted ↑ harms and inequalities; increasing 50p→65p ≈ 5.8–7.4% duty rise (above inflation) for similar alcohol specific deaths • Matching 75p requires ~14–16.1% duty rise • Not uprating erodes impact and adds deaths over time (e.g. no uprating at 65p: +501 deaths/20y)	• Raising the MPA above 50p/unit would further reduce consumption and harm, with the biggest gains in the most deprived areas • Lowering or removing MPA would increase harm and widen inequalities • Large duty rises would be needed to match MPA effects and would reduce inequalities less • An inflation linked uprating mechanism is needed to prevent erosion of impact over time	• Recall bias • Possible undercount of alcohol-related admissions • Modelling assumptions/forecast uncertainty (incl. inflation)
Sharma & Vandenberg (2019), Australia³¹	Estimate distributional effects of a \$2.00 AUD MUP vs similar tax across Australian wealth groups	1,395 Australian Households; Nielsen Company's continuous HomeScan panel survey (consumer scanner data from 2010 - 2011)	\$2.00 AUD per standard drink (10g of pure alcohol)	• Alcohol use • Financial	• \$2.00 MUP (scanner data): very small change in purchasing overall (≈-0.16%) • Predicted extra tax burden negligible for light/moderate purchasers; slightly higher for heaviest purchasers (≥90th quantile) • Overall wealth effects on purchasing were not significant across the distribution	• The estimated wealth effect of MUP on alcohol purchases was not significant across the distribution • Financial impacts for light/moderate consumers were small, with slightly larger impacts for the heaviest purchasers • The results do not support concerns that MUP unfairly shifts the burden to light/moderate drinkers	• Off premise only • Household (not individual) purchasing • Does not model stockpiling

Sherk et al. (2018), Canada ⁴⁵	Assess whether higher minimum alcohol prices reduce night-time ED visits for alcohol-related injuries	Residents within the city of Regina, Saskatchewan, Canada; Saskatchewan Ministry of Health (monthly ED visit data aggregate) (between 1 April 2006 to 31 March 2012)	\$CAD: Spirits (750ml) \$1.39; liqueurs (750ml) \$1.79; wine (750 ml) \$1.39; beer (6 pack, 2.0+6L) \$1.56; cocktails (1L) \$1.50; coolers (pre-mix) (6 pack, 2.0+6L) \$1.33	• Assault (non-domestic) • ED visits • Motor vehicle crashes	• Higher minimum prices: no immediate overall ED reduction • Lagged ↓ motor vehicle collision ED visits in women ≥26y (~39% over time) • ED visits for MV collisions and assaults fell over time in males 13–25y • No significant effects for several other injury categories	• Minimum price intervention was not associated with immediate decreased rates of ED visits as hypothesised • Did find a 6-month lagged decrease in alcohol-related injury ED visits for women due to MV collisions	• Single-city ED data (~20% of province) may understate effects • Potential unmeasured confounding in purchasing/harms • Pre policy period overlaps GFC • Seasonal variation in assault rates
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References

1. Boniface S, Scannell JW, Marlow S. Evidence for the effectiveness of minimum pricing of alcohol: a systematic review and assessment using the Bradford Hill criteria for causality. *BMJ open*. 2017;7(5):e013497. cited 2026 Apr 26] Available from: <https://adf.on.worldcat.org/oclc/8147106598>
2. World Health Organization. No place for cheap alcohol: the potential value of minimum pricing for protecting lives. [Internet]. 2022. [cited 2026 Apr 25]. Available from: <https://iris.who.int/server/api/core/bitstreams/3bde1c57-47b6-41fd-beac-6ce281b6eaa1/content>
3. Sheffield Addictions Research Group. *The Sheffield Tobacco and Alcohol Policy Modelling Platform*. [Internet]. Sheffield: University of Sheffield; 2025. [cited 2026 Apr 26] Available from: <https://sarg-sheffield.ac.uk/research/modelling/stapm/>
4. Bonomo Y, Norman A, Biondo S, Bruno R, Daglish M, Dawe S, et al. The Australian drug harms ranking study. *Journal of Psychopharmacology*. 2019. [cited 2026 Jun 11];33(7):759–68.
5. Australian Institute of Health and Welfare. *Australian Burden of Disease Study 2024*. [Internet]. Canberra: AIHW. 2024. [cited 2025 Dec 03] Available from: <https://www.aihw.gov.au/reports/burden-of-disease/australian-burden-of-disease-study-2024/contents/about>
6. Laslett AM, Room R, Kuntsche S, Anderson-Luxford D, Willoughby B, Doran C, et al. Alcohol's harm to others in 2021: Who bears the burden? *Addiction* [Internet]. 2023. [cited 2026 Apr 25];118(9):1726–38. doi: 10.1111/add.16205. Available from: <https://adf.on.worldcat.org/oclc/10191997486>
7. Cook M, Mojica-Perez Y, Callinan S. Distribution of alcohol use in Australia. [Internet]. 2022. [cited 2026 Apr 24]. Available from: <https://www.fare.org.au/wp-content/uploads/CAPR-report-Distribution-of-alcohol-use-in-Australia.pdf>
8. Smith K, Foster J. Alcohol, Health Inequalities and the Harm Paradox: Why some groups face greater problems despite consuming less alcohol. [Internet]. 2014. [cited 2026 Jun 11]. Available from: <https://www.ias.org.uk/wp-content/uploads/2020/09/rp15112014.pdf>
9. Torney A, Room R, Callinan S. Cask wine: Describing drinking patterns associated with Australia's cheapest alcohol. *Drug and Alcohol Review*. 2023. [cited 2026 Apr 24];42(6):1322–31. doi: 10.1111/dar.13684
10. Clifford S, Smith JA, Livingston M, Wright CJC, Griffiths KE, Miller PG. A historical overview of legislated alcohol policy in the Northern Territory of Australia: 1979–2021. *BMC Public Health* [Internet]. 2021. [cited 2026 Jun 11];21(1) doi: 10.1186/s12889-021-11957-5. Available from: <https://adf.on.worldcat.org/oclc/9354968382>
11. Taylor N, Miller P, Coomber K, Livingston M, Scott D, Buykx P, et al. The impact of a minimum unit price on wholesale alcohol supply trends in the Northern Territory, Australia. *Australian and New Zealand Journal of Public Health*. 2021. [cited 2026 Jun 11];45(1):26–33. doi: 10.1111/1753-6405.13055
12. Frontier Economics. Evaluation of the minimum unit price of alcohol in the Northern Territory. Prepared for the Northern Territory Department of Health. [Internet]. 2022. [cited 2026 Jun 11]. Available from: <https://health.nt.gov.au/media/pdf/alcohol-harm-minimisation/evaluation-mup-alcohol-nt.pdf>
13. Taylor N, Wright C. Gone but not forgotten: Why was the Northern Territory's Minimum Unit Price removed? [Internet]. United Kingdom: Institute of Alcohol Studies; 2025. [cited 2026 Apr 27] Available from: <https://www.ias.org.uk/2025/04/01/gone-but-not-forgotten-why-was-the-northern-territorys-minimum-unit-price-removed/>
14. Arnoult MH, Tiffin JR. Minimum Pricing of Alcohol and its Impact on Consumption in the UK. [Internet]. 2010. [cited 2026 Jun 11]. Available from: <https://ageconsearch.umn.edu/record/91810/?v=pdf>
15. O'May F, Gill J, Black H, Rees C, Chick J, McPake B. Heavy drinkers' perspectives on minimum unit pricing for alcohol in Scotland: a qualitative interview study. *Sage open*. 2016. [cited 2026 Jun 11];6(3):2158244016657141. Available from: <https://journals.sagepub.com/doi/full/10.1177/21582444016657141>
16. Garritty C, Hamel C, Trivella M, Gartlehner G, Nussbaumer-Streit B, Devane D, et al. Updated recommendations for the Cochrane rapid review methods guidance for rapid reviews of effectiveness. *BMJ* [Internet]. 2024;384:e076335. doi: 10.1136/bmj-2023-076335. [cited 2026 Apr 27] Available from: <https://www.bmj.com/content/bmj/384/bmj-2023-076335.full.pdf>
17. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021. [cited 2025 Aug 12];372. Available from: <https://adf.on.worldcat.org/oclc/8980161266>
18. Kilian C, Lemp JM, Llamas-Falcón L, Carr T, Ye Y, Kerr WC, et al. Reducing alcohol use through alcohol control policies in the general population and population subgroups: a systematic review and meta-analysis. *eClinicalMedicine*. 2023;59 doi: 10.1016/j.eclinm.2023.101996. [cited 2026 Apr 25] Available from: <http://dx.doi.org/10.1016/j.eclinm.2023.101996>
19. Maharaj T, Angus C, Fitzgerald N, Allen K, Stewart S, MacHale S, et al. Impact of minimum unit pricing on alcohol-related hospital outcomes: systematic review. *BMJ open*. 2023;13(2):e065220. doi: 10.1136/bmjopen-2022-065220
20. Patterson C, Giles L, Whitehead R, Greci S, Ferguson K, Fraser C, et al. Evaluating the impact of minimum unit pricing for alcohol in Scotland: a theory-based synthesis of the evidence. *Lancet*. 2023;402 Suppl 1:S14. doi: 10.1016/s0140-6736(23)02065-2

21. Clay JM, Farkouh EK, Stockwell T, Thomas G, Johnston K, Naimi TS. The impact of alcohol minimum pricing policies on vulnerable populations and health equity: A rapid review. *The International journal on drug policy*. 2025. [cited 2026 Jun 11]; 145:105014. doi: 10.1016/j.drugpo.2025.105014. Available from: <https://adf.on.worldcat.org/oclc/10980840814>
22. Coomber K, Miller P, Taylor N, Livingston M, Smith J, Buykx P, et al. Investigating the introduction of the alcohol minimum unit price in the Northern Territory Summary Report. [Internet]. 2020. [cited 2026 Jun 11] Available from: <https://health.nt.gov.au/media/pdf/alcohol-harm-minimisation/investigating-introduction-of-alcohol-minimum-unit-price-nt-summary-report.pdf>
23. Miller P, Coomber K, Lowen T, Taylor N, Livingston M, Scott D, et al. The Impact of Minimum Unit Price on Police-Recorded Alcohol-Related Assault Rates in the Northern Territory, Australia. *Journal of studies on alcohol and drugs*. 2023. [cited 2026 Jun 11];84(4):615–23. doi: 10.15288/jsad.22-00128. Available from: <https://adf.on.worldcat.org/oclc/9824156313>
24. Clifford S, Wright CJC, Miller PG, Coomber K, Griffiths KE, Smith JA, et al. What are the impacts of alcohol supply reduction measures on police-recorded adult domestic and family violence in the Northern Territory of Australia? *International Journal of Drug Policy*. 2024;127 doi: 10.1016/j.drugpo.2024.104426
25. Chen JJJ, Zhang X, Draper ADK, Kaur G, Field E, Boffa J, et al. Alcohol-related injury hospitalisations in relation to alcohol policy changes, Northern Territory, Australia, 2007–2022: A joinpoint regression analysis. *Drug and Alcohol Review*. 2025;44(1):324–35. doi: 10.1111/dar.13976
26. Miller P. Learning from Alcohol Policy Reforms in the Northern Territory. [Internet]. 2025. [cited 2026 Jun 11] Available from: <https://www.deakin.edu.au/about-deakin/news-and-media-releases/article/learning-from-alcohol-policy-reforms-in-the-northern-territory>
27. Robinson M, Mackay D, Giles L, Lewsey J, Richardson E, Beeston C. Evaluating the impact of minimum unit pricing (MUP) on off-trade alcohol sales in Scotland: an interrupted time-series study. *Addiction*. 2021;116(10):2697–707. doi: 10.1111/add.15478
28. Giles L, Mackay D, Richardson E, Lewsey J, Robinson M, Beeston C. Evaluating the impact of minimum unit pricing (MUP) on alcohol sales after 3 years of implementation in Scotland: A controlled interrupted time-series study. *Addiction*. 2024. [cited 2026 Jun 11];119(8):1378–86. doi: 10.1111/add.16492. Available from: <https://adf.on.worldcat.org/oclc/10582013732>
29. Stockwell T, Zhao J, Sher A, Callaghan RC, Macdonald S, Gatley J. Assessing the impacts of Saskatchewan's minimum alcohol pricing regulations on alcohol-related crime. *Drug and Alcohol Review*. 2017. [cited 2026 Jun 11];36(4):492–501. doi: 10.1111/dar.12471. Available from: <https://adf.on.worldcat.org/oclc/7081462120>
30. Jiang H, Livingston M, Room R, Callinan S, Marzan M, Brennan A, et al. Modelling the effects of alcohol pricing policies on alcohol consumption in subpopulations in Australia. *Addiction*. 2020;115(6):1038–49. doi: 10.1111/add.14898
31. Sharma A, Vandenberg B. Heterogenous wealth effects of minimum unit price on purchase of alcohol: Evidence using scanner data. *PLoS One*. 2019. 14(12):e0225538. doi: 10.1371/journal.pone.0225538. [cited 2026 Jun 11] Available from: <https://adf.on.worldcat.org/oclc/8404158267>
32. Marzan MB, Callinan S, Livingston M, Jiang H. Modelling the impacts of volumetric and minimum unit pricing for alcohol on social harms in Australia. *International Journal of Drug Policy*. 2024;129 doi: 10.1016/j.drugpo.2024.104502
33. Sharma A, Sinha K, Vandenberg B. Pricing as a means of controlling alcohol consumption. *Br Med Bull*. 2017. [cited 2026 Jun 11];123(1):149–58. doi: 10.1093/bmb/ldx020
34. O'Brien JW, Tschärke BJ, Bade R, Chan G, Gerber C, Mueller JF, et al. A wastewater-based assessment of the impact of a minimum unit price (MUP) on population alcohol consumption in the Northern Territory, Australia. *Addiction*. 2022. [cited 2026 Jun 11];117(1):243–9. doi: 10.1111/add.15631
35. Taylor N, Miller P, Coomber K, Livingston M, Jiang H, Buykx P, et al. Estimating the impact of the minimum alcohol price on consumers' alcohol expenditure in the Northern Territory, Australia. *Australian and New Zealand Journal of Public Health*. 2023;47(3) doi: 10.1016/j.anzjph.2023.100053
36. Meng Yang MY, Brennan A, Holmes J, Hill-McManus D, Angus C, Purshouse R, et al. Modelled income group-specific impacts of alcohol minimum unit pricing in England 2014/15: Policy appraisals using new developments to the Sheffield Alcohol Policy Model (V2. 5), 17th July 2013. [Internet]. 2013. [cited 2026 Jun 11]. Available from: <https://www.semanticscholar.org/paper/Modelled-income-group-specific-impacts-of-alcohol-Meng-Brennan/22ad16a425644e0422bc779cdd08e76fc20ac7e1>
37. Brennan A, Angus C, Pryce R, Buykx P, Henney M, Gillespie D, et al. Effectiveness of subnational implementation of minimum unit price for alcohol: policy appraisal modelling for local authorities in England. *Addiction (Abingdon, England)*. 2023;118(5):819–33. doi: 10.1111/add.16084
38. Morris D, Gillespie D, Chen R, Wilson L, Brennan A, Holmes J, et al. New modelling of alcohol pricing policies, alcohol consumption and harm in Wales: An adaptation of the Sheffield Tobacco and Alcohol Policy Model v2.6.0. [Internet]. 2025. Available from: https://www.gov.wales/sites/default/files/statistics-and-research/2025-07/new-modelling-of-alcohol-pricing-policies-alcohol-consumption-and-harm-in-wales_0.pdf
39. Angus C, Morris D, Leeming G, Chen R, Wilson L, Stevely A, et al. New modelling of alcohol pricing policies, alcohol consumption and harm in Scotland: An adaptation of the Sheffield Tobacco and Alcohol Policy Model - Final Report. [Internet]. 2023. Available from: <https://sarg-sheffield.ac.uk/wp-content/uploads/2024/11/sarg-scottish-mup-report-2023.pdf>

40. Bertin L, Leung G, Bohm MK, LeClerc J, Skillen EL, Esser MB. Estimating the Effects of Hypothetical Alcohol Minimum Unit Pricing Policies on Alcohol Use and Deaths: A State Example. *Journal of studies on alcohol and drugs*. 2024;85(1):120–32. doi: [10.15288/jsad.22-00274](https://doi.org/10.15288/jsad.22-00274)
41. Secombe P, Campbell L, Brown A, Bailey M, Pilcher D. Hazardous and harmful alcohol use in the Northern Territory, Australia: the impact of alcohol policy on critical care admissions using an extended sampling period. *Addiction (Abingdon, England)*. 2021;116(10):2653–62. doi: [10.1111/add.15432](https://doi.org/10.1111/add.15432)
42. Wright C, McNulty GR, Secombe PJ. The effect of alcohol policy on intensive care unit admission patterns in Central Australia: A before–after cross-sectional study. *Anaesthesia and Intensive Care*. 2021;49(1):35–43. doi: [10.1177/0310057X20977503](https://doi.org/10.1177/0310057X20977503)
43. Secombe PJ, Stewart P, Brown A, Bailey MJ, Pilcher D. The impact of an alcohol floor price on critical care admissions in Central Australia. *The Medical Journal of Australia*. 2020;212(5):229–30. [date cited 2026 Jun 26] Available from: <https://adf.on.worldcat.org/oclc/8586839470>
44. Clifford S, Wright CJC, Miller PG, Baldwin R, Griffiths KE, Smith JA, et al. Police-recorded adult sexual assault in the Northern Territory, Australia: Alcohol involvement and alcohol policy effects. *Drug and Alcohol Review*. 2024;43(2):519–28. doi: [10.1111/dar.13787](https://doi.org/10.1111/dar.13787)
45. Sherk A, Stockwell T, Callaghan RC. The effect on emergency department visits of raised alcohol minimum prices in Saskatchewan, Canada. *Drug and Alcohol Review*. 2018. [cited 2026 Jun 11];37:S357–S65. doi: [10.1111/dar.12670](https://doi.org/10.1111/dar.12670)
46. Taylor N, Miller P, Coomber K, Livingston M, Scott D, Buykx P, et al. The impact of a minimum unit price on wholesale alcohol supply trends in the Northern Territory, Australia. *Australian and New Zealand Journal of Public Health* [Internet]. 2021;45(1):26–33. doi: 10.1111/1753-6405.13055. Available from: <https://adf.on.worldcat.org/oclc/8925646827>
47. Hayes G. Cheap booze prices to rise as MSPs vote to increase minimum cost. BBC Scotland News [Internet]. 2024. [cited 2026 Jun 09] Available from: <https://www.bbc.com/news/articles/cgrjyqlqedpo>
48. Wilkinson E. Wales: Minimum unit price of alcohol to rise to 65p. *BMJ*. 2026. [cited 2026 Apr 24];392:s261. doi: [10.1136/bmj.s261](https://doi.org/10.1136/bmj.s261)
49. Anderson P, Stockwell T, Natera G, Kaner E. Minimum unit pricing for alcohol saves lives, so why is it not implemented more widely? *BMJ*. 2024;384:e077550. doi: [10.1136/bmj-2023-077550](https://doi.org/10.1136/bmj-2023-077550)
50. Neufeld M, Bobrova A, Davletov K, Štelemėkas M, Stoppel R, Ferreira-Borges C, et al. Alcohol control policies in Former Soviet Union countries: a narrative review of three decades of policy changes and their apparent effects. *Drug and Alcohol Review*. 2021;40(3):350–67. [cited 2026 Jun 26] Available from: <https://adf.on.worldcat.org/oclc/10422720571>
51. Patterson C, Giles L, Whitehead R, Greci S, Ferguson K, Fraser C, et al. Evaluating the impact of minimum unit pricing for alcohol in Scotland: Final report. A synthesis of the evidence. 27 June 2023. [Internet]. 2023. [cited 2026 Jun 11] doi: 10.1016/s0140-6736(23)02065-2. Available from: <https://publichealthscotland.scot/publications/evaluating-the-impact-of-minimum-unit-pricing-for-alcohol-in-scotland-a-synthesis-of-the-evidence>