



RESEARCH SUMMARY

Date Compiled: November 2020

Key takeaways from included research:

- In 2016, alcohol consumption was one of the leading risk factors for cancer development and cancer death globally, causing an estimated 376,200 cancer deaths, representing 4.2% of all cancer deaths.
- The results of a policy modeling study suggest that the introduction of minimum unit pricing between CAD \$1.50 and \$1.75 would substantially reduce the alcohol-caused burden of disease in Québec.
- Over the past century, differences in alcohol use and related harms between males and females in the United States have diminished considerably. In general, males still consume more alcohol and experience as well as cause more alcohol-related injuries and deaths than females do, but the gaps are narrowing.
- Implementing Washington's Initiative 1183 (privatizing liquor sales) appears to have been associated with a significant increase in the rate of accidental injury hospitalizations in urban counties in that state.
- A more stringent alcohol policy environment could reduce assault/vandalism and driving-related harm due to another drinker by lowering state binge drinking rates.

ALCOHOL CONSUMPTION. A LEADING RISK FACTOR FOR CANCER **November 2020**

Abstract

In 2016, alcohol consumption was one of the leading risk factors for cancer development and cancer death globally, causing an estimated 376 200 cancer deaths, representing 4.2% of all cancer deaths, and 10.3 million cancer disability-adjusted life years lost, representing 4.2% of all cancer disability-adjusted life years lost. The impact of alcohol consumption on cancer in 2016 varied by age group; the proportion of cancer deaths attributable to alcohol consumption ranged from 13.9% of cancer deaths among people aged 30–34 years to 2.7% of cancer deaths among people aged 80–84 years. The burden of cancers caused by alcohol consumption might be decreased through (i) individual-level and societal-level interventions that reduce alcohol consumption, and (ii) measures that target those risk factors that interact with alcohol consumption to increase the risk of cancer or that directly affect the risk of alcohol-related cancers.

Source: Rehm, J., Shield, K.D., & Weiderpass, E. (2020). Alcohol consumption. A leading risk factor for cancer. *Chemico-Biological Interactions*, 331.

<https://www.sciencedirect.com/science/article/abs/pii/S0009279719308506>

THE POTENTIAL HEALTH IMPACT OF AN ALCOHOL MINIMUM UNIT PRICE IN QUÉBEC: AN APPLICATION OF THE INTERNATIONAL MODEL OF ALCOHOL HARMS AND POLICIES **October 2020**

Abstract

Objective: Alcohol minimum unit pricing is a strategy capable of reducing alcohol-related harm from cheap alcoholic beverages. We used the International Model of Alcohol Harms and Policies (InterMAHP), an open-access alcohol harms estimator and policy scenario modeler, to estimate the potential health benefits of introducing minimum unit pricing in Québec, Canada.

Method: Aggregated mortality and hospitalization data were obtained from official administrative sources. Alcohol sales and pricing data were obtained from the partial government retail monopoly and Nielsen. Exposure data were from the Canadian Substance Use Exposure Database. Average price changes under two minimum-unit-pricing scenarios were estimated by applying a product-level pricing analysis. The online InterMAHP tool was used to automate the estimation of observed alcohol-attributable harm and what was projected in each policy scenario.

Results: Alcohol was estimated to cause 2,850 deaths and 24,694 hospitalizations in Québec in 2014. Introducing minimum unit pricing of CAD\$1.50 was estimated to reduce consumption by 4.4%, alcohol-attributable deaths by 5.9% (95% CI [0.2%, 11.7%]), and alcohol-attributable hospital stays by 8.4% (95% CI [3.2%, 13.7%]). Higher minimum unit pricing of CAD\$1.75 was estimated to reduce alcohol-attributable deaths by 11.5% (95% CI [5.9%, 17.2%]) and alcohol-attributable hospital stays by 16.3% (95% CI [11.2%, 21.4%]).

Conclusions: The results of this policy modeling study suggest that the introduction of minimum unit pricing between CAD\$1.50 and \$1.75 would substantially reduce the alcohol-caused burden of disease in Québec. The quantification of alcohol-caused death and disability, and the changes in these measures under two scenarios, was significantly automated by the open-access resource, InterMAHP.

Source: Sherk, A., Stockwell, T., April, N., et al. (2020). The potential health impact of an alcohol minimum unit price in Québec: An application of the international model of alcohol harms and policies.

GENDER DIFFERENCES IN THE EPIDEMIOLOGY OF ALCOHOL USE AND RELATED HARMS IN THE UNITED STATES
October 2020

Abstract

Over the past century, differences in alcohol use and related harms between males and females in the United States have diminished considerably. In general, males still consume more alcohol and experience and cause more alcohol-related injuries and deaths than females do, but the gaps are narrowing. Among adolescents and emerging adults, gaps in drinking have narrowed primarily because alcohol use among males has declined more than alcohol use among females. Among adults, alcohol use is increasing for women but not for men. Rates of alcohol-related emergency department visits, hospitalizations, and deaths all have increased among adults during the past two decades. Consistent with the changing patterns of alcohol use, increases in these outcomes have been larger for women. Recent studies also suggest that females are more susceptible than males to alcohol-induced liver inflammation, cardiovascular disease, memory blackouts, hangovers, and certain cancers. Prevention strategies that address the increases in alcohol consumption and unique health risks for women are needed.

Source: White, A. (2020). Gender differences in the epidemiology of alcohol use and related harms in the United States. *Alcohol Research Current Reviews*, 40(2): 01.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7590834/>

WASHINGTON'S LIQUOR LICENSE SYSTEM AND ALCOHOL-RELATED ADVERSE HEALTH OUTCOMES
October 2020

Abstract

Background and Aims: In June 2012, Washington state (USA) implemented Initiative 1183, privatizing liquor sales. As a result, off-premises outlets increased from 330 to over 1400 and trading hours lengthened. Increased availability of liquor may lead to increased consumption. This study examines the impact of Initiative 1183 on alcohol-related adverse health outcomes, measured by inpatient hospitalizations for alcohol-related disorders and accidental injuries. It further assesses heterogeneity by urbanicity, because outlets increased most in metropolitan-urban areas.

Design: County-by-quarter difference-in-difference linear regression models, estimated statewide and within metropolitan/rural strata.

Setting and Participants: Data are from AHRQ Healthcare Cost and Utilization State Inpatient Database 2010–2014 and HHS Area Health Resource File 2010–2014. Changes in the rates of hospitalizations in the 2.5 years following Initiative 1183 in Washington (n = 39 counties) are compared with changes in Oregon (n = 36 counties).

Measurements: County rates of hospitalizations per 1000 residents, including all records with any-listed ICD-9 Clinical Classification Software code denoting an alcohol-related disorder, and all records with any-listed external cause of injury code denoting an accidental injury.

Findings: The increase in the rate of accidental injury hospitalizations in Washington's metropolitan-urban counties was on average 0.289 hospitalizations per 1000 county residents per quarter greater than the simultaneous increase observed in Oregon (P = 0.017). This result was robust to alternative

specifications using a propensity score matched sample and synthetic control methods with data from other comparison states. The evidence did not suggest that Initiative 1183 was associated with differential changes in the rate of hospitalizations for alcohol-related disorders in metropolitan-urban ($P = 0.941$), non-metropolitan-urban ($P = 0.162$), or rural counties ($P = 0.876$).

Conclusions: Implementing Washington's Initiative 1183 (privatizing liquor sales) appears to have been associated with a significant increase in the rate of accidental injury hospitalizations in urban counties in that state but does not appear to be significantly associated with changes in the rate of hospitalizations specifically for alcohol-related disorders within 2.5 years.

Source: Phillips, A.Z., Rodriguez, H.P., Kerr, W.C., & Ahern, J.A. (2020). Washington's liquor license system and alcohol-related adverse health outcome. *Addiction*.
<https://onlinelibrary.wiley.com/doi/full/10.1111/add.15234>

STATE ALCOHOL POLICIES, BINGE DRINKING, PREVALENCE, SOCIOECONOMIC ENVIRONMENTS AND ALCOHOL'S HARMS TO OTHERS: A MEDIATION ANALYSIS
August 2020

Abstract

Aims: Alcohol policy effects on alcohol's harms due to others' drinking (AHTO) and contextual factors that may mediate such policy effects have been understudied. This study examines state binge drinking prevalence as a mediator of the relationship between state alcohol policy and socioeconomic environments and individual-level AHTO.

Methods: A nationally representative sample of US adults ($N = 32,401$; 13,873 males, 18,528 females) from the 2000, 2005, 2010 and 2015 National Alcohol Surveys and the 2015 National Alcohol's Harm to Others Survey, administered in telephone interviews and based on random digit dialed sampling, were linked with state-level Alcohol Policy Scale (APS) scores, binge drinking prevalence and socioeconomic status (SES) data. Three 12-month AHTO measures were family/marriage difficulties, assault or vandalism and riding with drunk driver or having traffic accident. Three-level mediation analyses were conducted, controlling for gender, race, education, marital status, family problem-drinking history and state policing rate.

Results: The effects of the APS on reduced risks for assault/vandalism and drinking-driving harms were significantly mediated by reduced state binge drinking prevalence. The APS had no direct or indirect effect on family/marital trouble. State SES had significant indirect effects on increased risks for assault/vandalism and driving-related harm through increased state binge drinking prevalence and a direct effect on reduced family/marital problems.

Conclusions: A more stringent alcohol policy environment could reduce assault/vandalism and driving-related harm due to another drinker by lowering state binge drinking rates. Alcohol policies may not be effective in reducing family problems caused by another drinker more prevalent in low-SES states.

Source: Cook, W.K., Li, L., Greenfield, T.K., et al. (2020). State alcohol policies, binge drinking, prevalence, socioeconomic environments and alcohol's harm to others: A mediation analysis. *Alcohol and Alcoholism*, agaa073.
<https://doi.org/10.1093/alcalc/agaa073>