



RESEARCH SUMMARY
Date Compiled: February 2024

Key takeaways from included research:

- A study was conducted to identify factors associated with fall-related emergency department (ED) visits related to alcohol and substance use among the working age population (WAP) in the United States. Using 2019-2020 data, researchers determined that 51.7% of ED visits were related to alcohol use, substance use, or both. They also concluded that individuals with depression along with substance use were twice as likely to visit the ED for a fall-related injury.
- A new study was published examining sales to apparently intoxicated persons in California, New Mexico, and Washington and comparing the rates to training requirements and impaired driving outcomes. The study found that pseudo-intoxicated patrons were served alcohol during 56.5% of the visits. Sales were most frequent in California (72.0%), then Washington (49.6%), and least frequent in New Mexico (47.9%). They also determined that sales were higher when intoxication cues were less obvious. Researchers concluded that overservice was frequent and elevated the risk of impaired driving among other harms. Better policies and well-established training can reduce over-service.
- Researchers examined alcohol Minimum Unit Pricing (MUP) policies to estimate the effects of hypothetical distilled spirits MUP policies and how they impact alcohol sales, consumption, and alcohol-attributable deaths. They found that increasing the MUP of spirits with 3.5% of the lowest prices to 40 cents could reduce total per capita consumption by 2.6% and prevent 232 (5.3%) alcohol-attributable deaths annually in Michigan. A 45 cent MUP would impact 8.0% of spirits and reduce consumption by 3.9% while preventing 354 (8.1%) of deaths. This study shows that even modest MUPs have the potential to decrease consumption thereby decreasing deaths and other harms.
- An Australian study examined characteristics of an individuals' trips to alcohol selling outlets relative to other activities and estimated the associations between alcohol outlet density and trips to outlets. They found that the greater bar and liquor store density within a predetermined area around the home was associated with overall trips to the outlets.
- A study was conducted to examine whether greater concentrations of alcohol outlets were associated with crime and whether this was moderated by the COVID-19 shelter-in-place orders. Researchers determined that in a medium-sized California city, on-sale outlet density, but not off-sale, appeared to be associated with increased crime. They emphasized that restricting hours and service has the potential to decrease crime in high on-sale density areas.

ALCOHOL AND SUBSTANCE USE AMONG THE WORKING AGE POPULATION: A NATIONWIDE STUDY OF FALL-RELATED EMERGENCY DEPARTMENT VISITS

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Objectives: Prior studies have linked fall-related emergency department (ED) visits among older adults to alcohol use. Characteristics related to falls in the working age population (WAP) (15-64 years) may vary with alcohol and substance use. This study aimed to identify factors associated with fall-related ED visits related to alcohol and substance use in the WAP.

Methods: Using nationally representative 2019–2020 National Hospital Ambulatory Medical Care Survey data, fall-related ED visits within 72 hours were stratified by indication of alcohol use, substance use, and concurrent alcohol and substance use. Descriptive statistics accounting for the survey's complex design were used along with multivariable logistic regression to identify associated factors.

Results: Between 2019 and 2020, an estimated 10,800,000 fall-related ED visits occurred among the WAP, with 51.7% related to alcohol use, substance use, or both. Multivariable logistic regression analysis revealed that the WAP with fall injury ED visits were associated with alcohol use (adjusted odds ratio [AOR]: 2.3, 95% confidence interval [CI]:1.0–5.9), concurrent alcohol and substance use (AOR: 8.5, 95% CI: 1.6–43.0) and individuals with alcohol- and substance-use with a depression diagnosis are twice as likely to visit EDs with fall injury.

Conclusion: Individuals with alcohol- and substance-use with depression were twice as likely to visit EDs for fall injuries. Higher fall-related ED visits in the WAP were attributed to alcohol and substance use. Identified factors could improve injury prevention and timely intervention among the WAP in the United States.

Source: Bhagavathula, A. S., & Aldhaleei, W. A. (2024). Alcohol and substance use among the working age population: a nationwide study of fall-related emergency department visits. *Journal of studies on alcohol and drugs*, jsad-23. <https://doi.org/10.15288/jsad.23-00330>

SALES TO APPARENTLY INTOXICATED CUSTOMERS IN THREE STATES WITH DIFFERENT HISTORIES OF RESPONSIBLE BEVERAGE SERVICE TRAINING

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Objective: Most states prohibit sales of alcohol to customers who are apparently intoxicated and many require training in responsible beverage service (RBS), with the aim of reducing driving while intoxicated (DWI) and other harms. Sales to apparently intoxicated patrons were assessed in on-site alcohol sales establishments and compared across three states.

Methods: A sample of 180 licensed on-site alcohol establishments was selected in California (n=60), New Mexico (n=60), and Washington state (n=60). States had different RBS training histories, content, and procedures. Research confederates, trained to feign cues of intoxication, visited each establishment twice. The pseudo-intoxicated patron (PP) ordered an alcoholic beverage while displaying intoxication cues. Sale of alcohol was the primary outcome.

Results: At 179 establishments assessed, PPs were served alcohol during 56.5% of 356 visits (35.6% of establishments served and 22.6% did not serve at both visits). Alcohol sales were less frequent in New Mexico (47.9% of visits; odds ratio [OR]=0.374, p=0.008) and Washington state (49.6%; OR=0.387, p=0.012) than in California (72.0%). Servers less consistently refused service at both visits (6.8%) in California than New Mexico (33.9%) or Washington (27.1%) ($\chi^2(4, N=177)=16.72, p=0.002$). Alcohol sales were higher when intoxication cues were less obvious ($p<0.001$).

Conclusions: Over-service of alcohol to apparently intoxicated customers was frequent and likely elevated risk of DWI and other harms. The lower sales in New Mexico and Washington than California may show that a policy approach prohibiting sales to intoxicated customers combined with well-established RBS training can reduce over-service. Further efforts are needed to reduce over-service.

Source: Buller, D. B., Woodall, W. G., Saltz, R., Martinez, L., Small, A., Chirico, N., & Cutter, G. R. (2024). Sales to apparently intoxicated customers in three states with different histories of responsible beverage service training. *Journal of studies on alcohol and drugs*, jsad-23. <https://doi.org/10.15288/jsad.23-00258>

ESTIMATING THE EFFECTS OF HYPOTHETICAL ALCOHOL MINIMUM UNIT PRICING POLICIES ON ALCOHOL USE AND DEATHS: A STATE EXAMPLE **January 2024**

Objective: Alcohol minimum unit pricing (MUP) policies establish a floor price beneath which alcohol cannot be sold. The potential effectiveness of MUP policies for reducing alcohol-attributable deaths in the United States has not been quantitatively assessed. Therefore, this study estimated the effects of two hypothetical distilled spirits MUP policies on alcohol sales, consumption, and alcohol-attributable deaths in one state.

Method: The International Model of Alcohol Harms and Policies tool was used to estimate the effects of two hypothetical MUP per standard drink policies (40-cent and 45-cent) pertaining to distilled spirits products at off-premises alcohol outlets in Michigan during 2020. Prevalence estimates on drinking patterns among Michigan adults were calculated by sex and age group. Prices per standard drink and sales of 9,747 spirits products were analyzed using National Alcohol Beverage Control Association data. Analyses accounted for other alcoholic beverage type sales using cross-price elasticities.

Results: Increasing the MUP of the 3.5% of spirits with the lowest prices per standard drink to 40 cents could reduce total alcohol per capita consumption in Michigan by 2.6% and prevent 232 (5.3%) alcohol-attributable deaths annually. A 45-cent MUP would affect 8.0% of the spirits and reduce total alcohol per capita consumption by 3.9%, preventing 354 (8.1%) deaths.

Conclusions: Modestly increasing the prices of the lowest-priced spirits with an MUP policy in a single state could save hundreds of lives annually. This suggests that alcohol MUP policies could be an effective strategy for improving public health in the United States, consistent with the World Health Organization's recommendation.

Source: Bertin, L., Leung, G., Bohm, M. K., LeClercq, J., Skillen, E. L., & Esser, M. B. (2024). 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*, 85(1), 120-132. <https://doi.org/10.15288/jsad.22-00274>

INDIVIDUALS' TRAVEL TO ALCOHOL OUTLETS: THE FALLACY OF THE LOCAL BAR **January 2024**

Introduction: Studies relating alcohol outlet density around homes to alcohol consumption produce mixed results. One possible explanation is that people travel to outlets away from their homes. This study aims to characterise individuals' trips to outlets, describe these trip locations relative to other activities and estimate associations between alcohol outlet density and trips to outlets.

Methods: This cross-sectional study used 2014–2018 household travel data from the Victoria Integrated Survey of Travel and Activity. We estimated the average change in the cumulative travel characteristics associated with each additional trip to bars and liquor stores, accounting for complex

trips to multiple destinations. Logistic regression models estimated odds that individuals travelled to outlets in relation to outlet density in their home local government area (LGA).

Results: Among 23,512 respondents, 378 (1.6%) travelled to any bar and 79 (0.3%) any liquor store the survey day. Bar trips added 8.2 km (95% confidence interval [CI] 4.6, 11.8) and 18.1 min (95% CI 13.6, 22.6) to cumulative travel; 41% of attended bars were co-located in participants' home LGA. Greater bar and liquor store density within the home LGA were associated with overall trips to these outlet types.

Discussion and Conclusions: Individuals travel beyond their residential area to bars, but travel to liquor stores closer to home. Bar and liquor store density within individuals' home LGA were associated with trips to outlets. Trips to local bars in near home comprised a minority of trips to bars in this sample. Studies of retail alcohol access should account for trips to bars away from home.

Source: Mehranbod, C. A., Gobaud, A. N., Bushover, B. R., & Morrison, C. N. (2024). Individuals' travel to alcohol outlets: The fallacy of the local bar. *Drug and Alcohol Review*. <https://doi.org/10.1111/dar.13808>

DID THE ASSOCIATION BETWEEN ALCOHOL OUTLET DENSITY AND CRIME CHANGE DURING COVID SHELTER-IN-PLACE ORDERS?

January 2024

Introduction: We investigated whether greater concentrations of on- and off-sale alcohol outlets were associated with crime and whether this association was moderated by COVID-19 shelter-in-place orders (SIP) that restricted on-premises consumption of alcohol.

Methods: Crimes (2019–2020) and addresses of licenced alcohol outlets in a medium-sized California city were geocoded within census block groups (N = 61). On- and off-sale alcohol outlet density was calculated as licenced outlets/2.59 km² (1 square mile). Multilevel negative binomial regression analyses were conducted to examine associations between alcohol outlet density and crime, and possible moderating effects of SIP, controlling for block group demographic characteristics and density of other retail businesses.

Results: On-sale outlet density was positively associated with total crimes and Part 2 crimes, while off-sale outlet density was inversely associated with total crime and Part 2 crimes. Overall, SIP was not significantly associated with crime, but moderated the associations of on-sale density with total crime and Part 1 crimes such that reductions in crime during SIP were observed in higher density areas. The association of off-sale outlets with crime was not moderated by SIP policies.

Discussion and Conclusion: On-sale outlet density, but not off-sale density, appears to be associated with increased crime. The results further indicate that restrictions in hours and service imposed by SIP policies reduced crime in high on-sale outlet density areas. These findings reinforce the importance of regulating alcohol outlet density and hours of service, especially for on-sale outlets, as a crime reduction strategy.

Source: O'Hara, S. E., Paschall, M. J., Grube, J. W., & Ponicki, W. R. (2024). Did the association between alcohol outlet density and crime change during COVID shelter-in-place orders?. *Drug and Alcohol Review*. <https://doi.org/10.1111/dar.13807>