IMPACT OF MARYLAND’S 2011 ALCOHOL SALES TAX INCREASE ON ALCOHOLIC BEVERAGE SALES

April 2016

Background: Increasing alcohol taxes has proven effective in reducing alcohol consumption, but the effects of alcohol sales taxes on sales of specific alcoholic beverages have received little research attention. Data on sales are generally less subject to reporting biases than self-reported patterns of alcohol consumption.

Objectives: We aimed to assess the effects of Maryland’s July 1, 2011 three percentage point increase in the alcohol sales tax (6–9%) on beverage-specific and total alcohol sales.

Methods: Using county-level data on Maryland’s monthly alcohol sales in gallons for 2010–2012, by beverage type, multilevel mixed effects multiple linear regression models estimated the effects of the tax increase on alcohol sales. We controlled for seasonality, county characteristics, and national unemployment rates in the main analyses.

Results: In the 18 months after the tax increase, average per capita sales of spirits were 5.1% lower (p < 0.001), beer sales were 3.2% lower (p < 0.001), and wine sales were 2.5% lower (p < 0.01) relative to what would have been expected from sales trends in the 18 months prior to the tax increase. Overall, the alcohol sales tax increase was associated with a 3.8% decline in total alcohol sold relative to what would have been expected based on sales in the prior 18 months (p < 0.001).

Conclusion: The findings suggest that increased alcohol sales taxes may be as effective as excise taxes in reducing alcohol consumption and related problems. Sales taxes also have the added advantages of rising with inflation and taxing the highest priced beverages most heavily.


LONG-TERM EFFECTS OF CHANGES IN SWEDISH ALCOHOL POLICY: CAN ALCOHOL POLICIES EFFECTIVE DURING ADOLESCENCE IMPACT CONSUMPTION DURING ADULTHOOD?

June 2016

Aims: To assess long-term effects of alcohol policy in Sweden by estimating the differences between cohorts growing up during periods with liberal alcohol policies and a cohort growing up during a period with restrictive alcohol policy.

Design: The data come from repeated cross-sectional surveys conducted in Sweden between 2002 and 2013, and were collected monthly using telephone interviews with a nationally representative sample. Cohorts were constructed by identifying periods when alcohol policy differed between being more liberal or more restrictive. The liberal-period cohorts were merged into one and compared with the restrictive-period cohort.

Setting: Sweden.


Measurements: Monthly volume of alcohol consumption in litres of pure alcohol derived from a beverage-specific graduated quantity–frequency scale.
Findings: Relative to the liberal-period reference cohorts (who turned 15 between 1966 and 1977 or 1992 and 2004), the cohort that grew up during a period with restrictive alcohol policy (turning 15 between 1978 and 1991) was found to have lower alcohol consumption (coeff. = −0.039: confidence interval −0.050 to −0.027; \( P < 0.001 \)). The mean volume for the liberal and restrictive cohorts across all survey years was 0.42 and 0.38 litres of pure alcohol, respectively. Consumption development for the period 2002–13 was, however, the same for both cohort groups.

Conclusions: Men and women in Sweden who grew up during a period with more restrictive alcohol policies currently drink less alcohol than those who grew up during periods with more liberal policies.


**THE EFFECT OF A SUNDAY LIQUOR-SALES BAN REPEAL ON CRIME: A TRIPLE-DIFFERENCE ANALYSIS**

April 2016

Background: This study investigates whether alcohol availability in state-run liquor stores affects crime nearby. In 2003, Pennsylvania repealed its Sunday alcohol-sales ban for a portion of its state-run liquor stores. We capitalize on this change in alcohol policy to assess the effect of alcohol availability on crime occurring within the vicinity of liquor stores that opened on Sundays in Philadelphia.

Methods: We employed a difference-in-difference-in-differences model that compared reported crime before versus after the change in alcohol policy, Sundays versus other days of the week, and the fraction of liquor stores affected versus not affected by the repeal. We used crime incident data in Philadelphia between 1998 and 2011.

Results: The repeal was associated with a significant increase in total and property-crime incidents occurring around Sunday-open state liquor stores in low-socioeconomic-status neighborhoods. We found no evidence of the displacement of crime to nearby areas.

Conclusions: This is the first triple-difference alcohol study that attempts to isolate the micro-spatial effects of a shift in alcohol availability on local crime patterns, and shows that the repeal of Sunday alcohol-sales restrictions may increase crime in poor urban areas.


**JELLO SHOT CONSUMPTION AMONG UNDERAGE YOUTHS IN THE UNITED STATES**

May 2016

Abstract: We sought, for the first time, to identify the extent of jello shot consumption among underage youths. We conducted a study among a national sample of 1,031 youths, ages 13 to 20, using a pre-recruited Internet panel maintained by GfK Knowledge Networks to assess past 30-day consumption of jello shots. Nearly one-fifth of underage youths have consumed jello shots in the past 30 days and jello shots make up an average of nearly 20% of their overall alcohol intake. Jello shot users in our sample were approximately 1.5 times more likely to binge drink, consumed approximately 1.6 times as many drinks per month, and were 1.7 times more likely to have been in a physical fight related to their alcohol use as drinkers in general. Ascertainment of jello shot use should become a standard part of youth alcohol surveillance and states should consider banning the sale of these products.

ASSOCIATION OF HEPATITIS C VIRUS WITH ALCOHOL USE AMONG U.S. ADULTS: NHANES 2003–2010

May 2016

Introduction: Excessive alcohol use exacerbates morbidity and mortality among hepatitis C virus (HCV)–infected people. The purpose of this study was to describe self-reported patterns of alcohol use and examine the association with HCV infection and other sociodemographic and health-related factors.

Methods: Data from 20,042 participants in the 2003–2010 National Health and Nutrition Examination Survey were analyzed in 2014. Estimates were derived for self-reported demographic characteristics, HCV-RNA (indicative of current HCV infection) status, and alcohol use at four levels: lifetime abstainers, former drinkers, non-excessive current drinkers, and excessive current drinkers.

Results: Former drinkers and excessive current drinkers had a higher prevalence of HCV infection (2.2% and 1.5%, respectively) than never or non-excessive current drinkers (0.4% and 0.9%, respectively). HCV-infected adults were estimated to ever drink five or more drinks/day almost every day at some time during their lifetime about 3.3 times more often (43.8% vs 13.7%, p<0.001) than those who were never infected with HCV. Controlling for age, sex, race/ethnicity, education, and having a usual source of health care, HCV infection was significantly associated with excessive current drinking (adjusted prevalence ratio, 1.3; 95% CI=1.1, 1.6) and former drinking (adjusted prevalence ratio, 1.3; 95% CI=1.1, 1.6).

Conclusions: Chronic HCV infection is associated with both former and excessive current drinking. Public health HCV strategies should implement interventions with emphasis on alcohol abuse, which negatively impacts disease progression for HCV-infected individuals.

Full Study: http://www.ajpmonline.org/article/S0749-3797(16)30065-4/fulltext

PARENTS WHO SUPPLY SIPS OF ALCOHOL IN EARLY ADOLESCENCE: A PROSPECTIVE STUDY OF RISK FACTORS

March 2016

Background: Parents are a major supplier of alcohol to adolescents, often initiating use with sips. Despite harms of adolescent alcohol use, research has not addressed the antecedents of such parental supply. This study investigated the prospective associations between familial, parental, peer, and adolescent characteristics on parental supply of sips.

Methods: Participants were 1729 parent–child dyads recruited from Grade 7 classes, as part of the Australian Parental Supply of Alcohol Longitudinal Study. Data are from baseline surveys (Time 1) and 1-year follow-up (Time 2). Unadjusted and adjusted logistic regressions tested prospective associations between Time 1 familial, parental, peer, and adolescent characteristics and Time 2 parental supply.

Results: In the fully adjusted model, parental supply was associated with increased parent-report of peer substance use (odds ratio [OR] = 1.20, 95% confidence ratio [CI], 1.08–1.34), increased home alcohol access (OR = 1.07, 95% CI, 1.03–1.11), and lenient alcohol-specific rules (OR=0.88, 95% CI, 0.78–0.99).

Conclusions: Parents who perceived that their child engaged with substance-using peers were more likely to subsequently supply sips of alcohol. Parents may believe supply of a small quantity of alcohol will protect their child from unsupervised alcohol use with peers. It is also possible that parental perception of peer substance use may result in parents believing that this is a normative behavior for their child’s age group, and in turn that supply is also normative. Further research is required to understand the impacts of such supply, even in small quantities, on adolescent alcohol use trajectories.

Full Study: http://pediatrics.aappublications.org/content/early/2016/02/24/peds.2015-2611
**IMPULSIVITY MODERATES THE EFFECTS OF MOVIE ALCOHOL PORTRAYALS ON ADOLESCENTS’ WILLINGNESS TO DRINK**

April 2016

**Abstract:** This study examined impulsivity as a moderator of adolescents’ reactions to positive versus negative portrayals of drinking in American movie clips. Impulsivity, along with willingness and intentions to drink in the future, were assessed in a pretest session. In the experimental sessions, adolescents viewed a series of clips that showed drinking associated with either positive outcomes (e.g., social facilitation) or negative outcomes (fights, arguments). A third group viewed clips with similar positive or negative outcomes, but no alcohol consumption. All participants then responded to an implicit measure of attentional bias regarding alcohol (a dot probe), followed by explicit alcohol measures (self-reports of willingness and intentions to drink). Hypotheses, based on dual-processing theories, were: (a) high-impulsive adolescents would respond more favorably than low-impulsive adolescents to the positive clips, but not the negative clips; and (b) this difference in reactions to the positive clips would be larger on the willingness than the intention measures. Results supported the hypotheses: Adolescents high in impulsivity reported the highest willingness to drink in the positive-clip condition, but were slightly less willing than others in the negative-clip condition. In addition, results on the dot probe task indicated that RTs to alcohol words were negatively correlated with changes in alcohol willingness, but not intention; that is, the faster their response to the alcohol words, the more their willingness increased. The results highlight the utility of a dual-processing perspective on media influence.


**COST-EFFECTIVENESS OF MOTIVATIONAL INTERVENTION WITH SIGNIFICANT OTHERS FOR PATIENTS WITH ALCOHOL MISUSE**

May 2016

**Aims:** To estimate the incremental cost, cost-effectiveness and benefit–cost ratio of incorporating a significant other (SO) into motivational intervention for alcohol misuse.

**Design:** We obtained economic data from the one year with the intervention in full operation for patients in a recent randomized trial.

**Setting:** The underlying trial took place at a major urban hospital in the United States.

**Participants:** The trial randomized 406 (68.7% male) eligible hazardous drinkers (196 during the economic study) admitted to the emergency department or trauma unit.

**Intervention:** The motivational interview condition consisted of one in-person session featuring personalized normative feedback. The significant other motivational interview condition comprised one joint session with the participant and SO in which the SO's perspective and support were elicited.

**Measurements:** We ascertained activities across 445 representative time segments through work sampling (including staff idle time), calculated the incremental cost in per patient of incorporating an SO, expressed the results in 2014 US$, incorporated quality and mortality effects from a closely related trial and derived the cost per quality-adjusted life-year (QALY) gained.

**Findings:** From a health system perspective, the incremental cost per patient of adding an SO was $341.09 [95% confidence interval (CI) = $244.44–437.74]. The incremental cost per year per hazardous drinker averted was $3623 (CI = $1777–22 709), the cost per QALY gained $32 200 (CI = $15 800–201 700), and the benefit–cost ratio was 4.73 (95% CI = 0.7–9.66). If adding an SO into the intervention strategy were concentrated during the hours with highest risk or in a trauma unit, it would become even more cost-beneficial.

**Conclusions:** Using criteria established by the World Health Organization (cost-effectiveness below the country’s gross domestic product per capita), incorporating a significant other into a patient's motivational intervention for alcohol misuse is highly cost-effective.

EXTENDED AMYGDALA TO VENTRAL TEGMENTAL AREA CORTICOTROPIN-RELEASING FACTOR CIRCUIT CONTROLS BINGE ETHANOL INTAKE

March 2016

Background: Corticotropin-releasing factor (CRF) signaling at the CRF1 receptor (CRF\(_1\)R) in the ventral tegmental area (VTA) can modulate ethanol consumption in rodents. However, the effects of binge-like ethanol drinking on this system have not been thoroughly characterized, and little is known about the role of CRF\(_2\)R or the CRF neurocircuitry involved.

Methods: The effects of binge-like ethanol consumption on the VTA CRF system were assessed following drinking-in-the-dark procedures. Intra-VTA infusions of selective CRF\(_1\)R and/or CRF\(_2\)R compounds were employed to assess the contributions of these receptors in modulating binge-like ethanol consumption (\(n = 89\)). To determine the potential role of CRF projections from the bed nucleus of the stria terminalis (BNST) to the VTA, CRF neurons in this circuit were chemogenetically inhibited (\(n = 32\)). Binge-induced changes in VTA CRF system protein and messenger RNA were also assessed (\(n = 58\)).

Results: Intra-VTA antagonism of CRF\(_1\)R and activation of CRF\(_2\)R resulted in decreased ethanol intake, which was eliminated by simultaneous blockade of both receptors. Chemogenetic inhibition of local CRF neurons in the VTA did not alter binge-like ethanol drinking, but inhibition of VTA-projecting CRF neurons from the BNST significantly reduced intake.

Conclusions: We provide novel evidence that 1) blunted binge-like ethanol consumption stemming from CRF\(_1\)R blockade requires intact CRF\(_2\)R signaling, and CRF\(_2\)R activation reduces binge-like drinking; 2) inhibiting VTA-projecting BNST CRF neurons attenuates binge-like drinking; and 3) binge-like ethanol drinking alters protein and messenger RNA associated with the VTA-CRF system. These data suggest that ethanol-induced activation of BNST-to-VTA CRF projections is critical in driving binge-like ethanol intake.