



RESEARCH SUMMARY

Date Compiled: October 2020

Key takeaways from included research:

- From 2000 through 2018, greater percentage increases in the rates of alcohol-induced deaths occurred in rural areas compared with urban areas overall, for both males and females. By 2018, rates were 18% higher for males and 23% higher for females in rural compared with urban areas.
- New research provides evidence of changes in alcohol use and associated consequences during the COVID-19 pandemic. In addition to a range of negative physical health associations, excessive alcohol use may lead to or worsen existing mental health problems, such as anxiety or depression, which may themselves be increasing during COVID-19.
- Any alcohol use during pregnancy is associated with subtle yet significant psychological and behavioral effects in children. Women should continue to be advised to abstain from alcohol consumption from conception throughout pregnancy.
- Alcohol-induced loss of consciousness, irrespective of overall alcohol consumption, is associated with a subsequent increase in the risk of dementia.
- Findings from a case-control investigation involving 11 U.S. health care facilities found that close contact with persons with known COVID-19 or going to locations that offer on-site eating and drinking options were associated with COVID-19 positivity. Adults with positive SARS-CoV-2 test results were approximately twice as likely to have reported dining at a restaurant than were those with negative SARS-CoV-2 test results.

RATES OF ALCOHOL-INDUCED DEATHS AMONG ADULTS AGED 25 AND OVER IN URBAN AND RURAL AREAS: UNITED STATES, 2000–2018

October 2020

Summary

This report describes trends in rates of alcohol-induced deaths among adults aged 25 and over from 2000 through 2018, with a focus on differences by sex and urbanization level of the decedent's county of residence. Rates overall and rates for males and females increased over the period. While rates were higher for males than females for each year, the rate of change was greater for females, resulting in a narrowing of the differences between male and female rates. In 2000, the rate for males was 3.6 times the rate for females (17.5 and 4.9, respectively); in 2018, the rate for males was 2.6 times the rate for females (22.6 and 8.6, respectively). From 2000 through 2018, greater percentage increases in the rates occurred in rural areas compared with urban areas overall, for both males and females. In more recent years, rates of alcohol-induced deaths were higher in rural areas than urban areas; by 2018, rates were 18% higher for males and 23% higher for females in rural compared with urban areas. Rates increased between 2000 and 2018 for all urbanization level groups among males and females. Among males, the rate in large central metro areas was highest in 2000 whereas the rate in large fringe metro areas (suburban) was lowest. Similar to men, rates were highest in large central metro areas among females in 2000; however, rates in noncore areas were lowest, along with large fringe metro areas. By 2018, rates for small metro, medium metro, and rural areas were higher than for large central metro and fringe metro areas among both males and females, with greater magnitudes of change among women (i.e., rates more than doubled in small metro, micropolitan, and noncore areas).

Source: Spencer, M.R., Curtin, S.C., & Hedegaard, H. (2020). *Rates of alcohol-induced deaths among adults aged 25 and over in urban and rural areas: United States, 2000–2018*. National Center for Health Statistics (NCHS) Data Brief, No. 383. Centers for Disease Control and Prevention. <https://www.cdc.gov/nchs/data/databriefs/db383-H.pdf>

CHANGES IN ADULT ALCOHOL USE AND CONSEQUENCES DURING THE COVID-19 PANDEMIC IN THE US

September 2020

Summary

Introduction: As stay-at-home orders began in some US states as a mitigation strategy for coronavirus disease 2019 (COVID-19) transmission, Nielsen reported a 54% increase in national sales of alcohol for the week ending March 21, 2020, compared with 1 year before; online sales increased 262% from 2019. Three weeks later, the World Health Organization warned that alcohol use during the pandemic may potentially exacerbate health concerns and risk-taking behaviors. This study examines individual-level changes in alcohol use and consequences associated with alcohol use in US adults, as well as demographic disparities, from before to during the COVID-19 pandemic.

Results: The current analytic sample includes 1540 adults (87.0%; mean [SD] age, 56.6 [13.5] years; 825 [53.6%] were in the age range of 30-59 years; and 883 [57.3%] were female) from the baseline survey who, approximately 1 year later, completed the wave 2 survey. Frequency of alcohol consumption increased (1) overall, 0.74 days (95% CI, 0.33-1.15 days), representing an increase of 14% over the baseline of 5.48 days in 2019; (2) for women, 0.78 days (95% CI, 0.41-1.15 days), representing an increase of 17% over the 2019 baseline of 4.58 days; (3) for adults age 30 to 59 years, 0.93 days (95% CI, 0.36-1.51 days), an increase of 19%; and (4) for non-Hispanic White individuals, 0.66 days (95% CI, 0.14 to 1.17 days), an increase of 10% over the 2019 baseline of 6.46 days. On average, alcohol was consumed 1 day more per month by 3 of 4 adults. For women, there was also a significant increase of 0.18 days of heavy drinking (95% CI, 0.04-0.32 days), from a 2019

baseline of 0.44 days, which represents an increase of 41% over baseline. This equates to an increase of 1 day for 1 in 5 women. For women there was an average increase in the Short Inventory of Problems scale of 0.09 (95% CI, 0.01-0.17 items), over the 2019 average baseline of 0.23, representing a 39% increase, which is indicative of increased alcohol-related problems independent of consumption level for nearly 1 in 10 women.

Discussion: These data provide evidence of changes in alcohol use and associated consequences during the COVID-19 pandemic. In addition to a range of negative physical health associations, excessive alcohol use may lead to or worsen existing mental health problems, such as anxiety or depression, which may themselves be increasing during COVID-19. The population level changes for women, younger, and non-Hispanic White individuals highlight that health systems may need to educate consumers through print or online media about increased alcohol use during the pandemic and identify factors associated with susceptibility and resilience to the impacts of COVID-19. Study limitations include that measures are self-reports, which may be subject to social desirability bias. Additionally, not all baseline respondents completed wave 2, although nonrespondents did not significantly differ from completers on any of the outcome measures at baseline. Nonetheless, these results suggest that examination of whether increases in alcohol use persist as the pandemic continues and whether psychological and physical well-being are subsequently affected may be warranted.

Source: Pollard, M.S., Tucker, J.S., & Green, H.D. (2020). Changes in adult alcohol use and consequences during the COVID-19 pandemic in the US. *JAMA Network Open*, 3(9).
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770975>

ASSOCIATION OF PRENATAL ALCOHOL EXPOSURE WITH PSYCHOLOGICAL, BEHAVIORAL, AND NEURODEVELOPMENTAL OUTCOMES IN CHILDREN FROM THE ADOLESCENT BRAIN COGNITIVE DEVELOPMENT STUDY
September 2020

Abstract

Objective: Data on the neurodevelopmental and associated behavioral effects of light to moderate in utero alcohol exposure are limited. This retrospective investigation tested for associations between reported maternal prenatal alcohol use and psychological, behavioral, and neurodevelopmental outcomes in substance-naive youths.

Methods: Participants were 9,719 youths (ages 9.0 to 10.9 years) from the Adolescent Brain Cognitive Development Study. Based on parental reports, 2,518 (25.9%) had been exposed to alcohol in utero. Generalized additive mixed models and multilevel cross-sectional and longitudinal mediation models were used to test whether prenatal alcohol exposure was associated with psychological, behavioral, and cognitive outcomes, and whether differences in brain structure and resting-state functional connectivity partially explained these associations at baseline and 1-year follow-up, after controlling for possible confounding factors.

Results: Prenatal alcohol exposure of any severity was associated with greater psychopathology, attention deficits, and impulsiveness, with some effects showing a dose-dependent response. Children with prenatal alcohol exposure, compared with those without, displayed greater cerebral and regional volume and greater regional surface area. Resting-state functional connectivity was largely unaltered in children with in utero exposure. Some of the psychological and behavioral outcomes at baseline and at the 1-year follow-up were partially explained by differences in brain structure among youths who had been exposed to alcohol in utero.

Conclusions: Any alcohol use during pregnancy is associated with subtle yet significant psychological and behavioral effects in children. Women should continue to be advised to abstain from alcohol consumption from conception throughout pregnancy.

Source: Lees, B., Mewton, L., Jacobus, J. et al. (2020). Association of prenatal alcohol exposure with psychological, behavioral, and neurodevelopmental outcomes in children from the adolescent brain cognitive development study. *The American Journal of Psychiatry*.

<https://ajp.psychiatryonline.org/doi/10.1176/appi.ajp.2020.20010086>

ASSOCIATION OF ALCOHOL-INDUCED LOSS OF CONSCIOUSNESS AND OVERALL ALCOHOL CONSUMPTION WITH RISK FOR DEMENTIA

September 2020

Abstract

Objective: To examine the risk of future dementia associated with overall alcohol consumption and alcohol-induced loss of consciousness in a population of current drinkers.

Design, Setting, and Participants: Seven cohort studies from the UK, France, Sweden, and Finland (IPD-Work consortium) including 131 415 participants were examined. At baseline (1986-2012), participants were aged 18 to 77 years, reported alcohol consumption, and were free of diagnosed dementia. Dementia was examined during a mean follow-up of 14.4 years (range, 12.3-30.1). Data analysis was conducted from November 17, 2019, to May 23, 2020.

Exposures: Self-reported overall consumption and loss of consciousness due to alcohol consumption were assessed at baseline. Two thresholds were used to define heavy overall consumption: greater than 14 units (U) (UK definition) and greater than 21 U (US definition) per week.

Main Outcomes and Measures: Dementia and alcohol-related disorders to 2016 were ascertained from linked electronic health records.

Results: Of the 131 415 participants (mean [SD] age, 43.0 [10.4] years; 80 344 [61.1%] women), 1081 individuals (0.8%) developed dementia. After adjustment for potential confounders, the hazard ratio (HR) was 1.16 (95% CI, 0.98-1.37) for consuming greater than 14 vs 1 to 14 U of alcohol per week and 1.22 (95% CI, 1.01-1.48) for greater than 21 vs 1 to 21 U/wk. Of the 96 591 participants with data on loss of consciousness, 10 004 individuals (10.4%) reported having lost consciousness due to alcohol consumption in the past 12 months. The association between loss of consciousness and dementia was observed in men (HR, 2.86; 95% CI, 1.77-4.63) and women (HR, 2.09; 95% CI, 1.34-3.25) during the first 10 years of follow-up (HR, 2.72; 95% CI, 1.78-4.15), after excluding the first 10 years of follow-up (HR, 1.86; 95% CI, 1.16-2.99), and for early-onset (<65 y: HR, 2.21; 95% CI, 1.46-3.34) and late-onset (≥65 y: HR, 2.25; 95% CI, 1.38-3.66) dementia, Alzheimer disease (HR, 1.98; 95% CI, 1.28-3.07), and dementia with features of atherosclerotic cardiovascular disease (HR, 4.18; 95% CI, 1.86-9.37). The association with dementia was not explained by 14 other alcohol-related conditions. With moderate drinkers (1-14 U/wk) who had not lost consciousness as the reference group, the HR for dementia was twice as high in participants who reported having lost consciousness, whether their mean weekly consumption was moderate (HR, 2.19; 95% CI, 1.42-3.37) or heavy (HR, 2.36; 95% CI, 1.57-3.54).

Conclusions and Relevance: The findings of this study suggest that alcohol-induced loss of consciousness, irrespective of overall alcohol consumption, is associated with a subsequent increase in the risk of dementia.

Source: Kivimaki, M., Singh-Manoux, A., Batty, G.D., et al. (2020). Association of alcohol-induced loss of consciousness and overall alcohol consumption with risk for dementia. *JAMA Network Open*, 3(9). <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770285>

COMMUNITY AND CLOSE CONTACT EXPOSURES ASSOCIATED WITH COVID-19 AMONG SYMPTOMATIC ADULTS ≥18 YEARS IN 11 OUTPATIENT HEALTH CARE FACILITIES — UNITED STATES, JULY 2020
September 2020

Summary

Discussion: In this investigation, participants with and without COVID-19 reported generally similar community exposures, with the exception of going to locations with on-site eating and drinking options. Adults with confirmed COVID-19 (case-patients) were approximately twice as likely as were control-participants to have reported dining at a restaurant in the 14 days before becoming ill. In addition to dining at a restaurant, case-patients were more likely to report going to a bar/coffee shop, but only when the analysis was restricted to participants without close contact with persons with known COVID-19 before illness onset. Reports of exposures in restaurants have been linked to air circulation (7). Direction, ventilation, and intensity of airflow might affect virus transmission, even if social distancing measures and mask use are implemented according to current guidance. Masks cannot be effectively worn while eating and drinking, whereas shopping and numerous other indoor activities do not preclude mask use.

Source: Fisher, K.A., Tenforde, M.W., Feldstein, L.R., et al. (2020). Community and close contact exposures associated with COVID-19 among symptomatic adults ≥18 years in 11 outpatient health care facilities — United States, July 2020. *Morbidity and Mortality Weekly Report*, 69(36); 1258–1264. <https://www.cdc.gov/mmwr/volumes/69/wr/mm6936a5.htm>