

# **Impacts of Alcohol on Worker Health, Safety, Risk-taking and Workplace Costs**

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Work-related injuries and illnesses account for an estimated \$250 billion annually in medical expenses and indirect costs, such as lost earnings and benefits, and reduced productivity. These costs are 12% higher than the costs for all cancers and 30% higher than costs for diabetes.<sup>i</sup>

## Alcohol Increases Illness Risks and Exacerbates Other Illnesses

The Centers for Disease Control and Prevention identifies 58 acute and chronic illnesses and injuries associated with alcohol use,<sup>ii</sup> including alcoholism, fetal alcohol syndrome, alcoholic liver cirrhosis and alcohol-induced pancreatitis. Prolonged and heavy alcohol use increases risks of developing other diseases as well, generally by small percentages. Diseases of the liver, gallbladder and pancreas are also more likely with heavy and prolonged use of alcohol.

For example, alcohol use increases the risk for breast cancer in women, and cancer risk in men and women for colorectal, esophageal, laryngeal, liver, mouth, stomach and pancreatic cancers. It slightly increases the risks for heart disease and stroke, including atrial fibrillation, coronary heart disease, hypertension, and hemorrhagic and ischemic stroke. Use of other substances, including opioids, cocaine, cannabis and other illicit substances, is associated with increased risk of hepatitis B and C, HIV/AIDS, liver cancer, and SUDs.<sup>iii</sup>

The impact of excessive alcohol use on the human body can vary by age group. For example, among all cirrhosis deaths in 2015, 49.5 percent were alcohol-related. The proportion of alcohol-related cirrhosis deaths was highest (76.8 percent) among persons aged 25 to 34, followed by persons aged 35 to 44, at 72.7 percent.<sup>iv</sup> Some of these illnesses and conditions (including alcohol use disorder and alcoholic liver disease, which is 100% alcohol attributable, as well as certain cancers and heart conditions, which are caused in part by excessive alcohol consumption)<sup>v</sup> primarily occur in the elderly, following decades of use of alcohol and other drugs.

The costs of treating these illnesses primarily falls to Medicare, to industries with aging workforces (e.g., government, durable goods manufacturing), and to companies and unions covering retiree health benefits. Other financial impacts on the medical system include the following:

- Alcohol contributes to about 18.5 percent of emergency department (ED) visits and 22.1 percent of overdose deaths related to prescription opioids<sup>vi</sup>
- The rate of all alcohol related ED visits increased, on average, by 210,000 visits per year between 2006 and 2014<sup>vii</sup>

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Heavy episodic drinking (defined by the CDC as 15 or more drinks per week for men and 8 or more per week for women<sup>viii</sup>) has been found to increase the risk of disability leave, an association which holds across gender and socioeconomic strata.<sup>ix</sup> Heavy alcohol use appears to increase risk of disability leave and prolongs length of disability for mental illness, especially depression.<sup>x</sup> Several studies have found workers in recovery cited health reasons for quitting, such as hypertension, diabetes and anxiety, or medications they were prescribed, perhaps accounting for greater health care use and disability than abstainers.<sup>xi</sup>

## Impacts of Alcohol on Workplace Safety

Acute episodes of binge alcohol use, in particular, are associated with workplace and off-the-job injuries.<sup>xii</sup> The CDC and researchers internationally find that acute alcohol use impairs vision, psychomotor skills/abilities, reaction time and judgement about risk-taking, all of which are strongly linked to motor vehicle crashes, fall injuries, drowning, firearm injuries, and occupational and machine injuries. The CDC estimates that alcohol use contributes to 18% of workplace injuries.<sup>xiii</sup> Acute episodes of binge alcohol use are also associated with workplace absences due to injuries.<sup>xiv</sup> As one research team states: *“The dose-response relationship between acute alcohol use, measured through the blood alcohol concentration and injury, seems exponential for all injury types.”* The higher the blood alcohol concentration, the higher the risk.<sup>xv</sup>

A 2018 review of employee psychoactive substance use<sup>xvi</sup> found injuries are consistently associated with a single occasion of heavy drinking that occurs one to six hours before being injured. This means that acute impairment at the time of the injury is the underlying causal factor. Alcohol use during the workday and heavy binge drinking the evening before work impairs concentration, coordination, judgement and fine motor skills, likely increasing the risk of injury.<sup>xvii</sup>

## Impacts of Other Drugs on Workplace Safety

Evidence of occupational injury associated with use of drugs other than alcohol is inconsistent. Well-designed studies are few.<sup>xviii</sup> Some studies find cannabis use associated with vehicle crashes<sup>xix</sup> and occupational injury.<sup>xx</sup> Many others, however, find no or very weak correlations. Prescription pain medications and benzodiazepine use seem to be associated with workplace-related injuries from falls and motor vehicle crashes.<sup>xxi</sup> A Washington State survey found that respondents who used painkillers (15.9%) or cannabis (8.9%) to get high were more likely to report an injury in the prior year, more than workers who did not report these behaviors (6.3%).<sup>xxii</sup> The 2014 American College of Occupational and Environmental Medicine practice guidelines on

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opioid and safety-sensitive work recommend workers who perform safety-sensitive jobs or operate motor vehicles not use opioids.<sup>xxiii</sup>

## Risk-taking

A plausible link can be drawn between workers' substance use, injury and disability, and substance users' greater risk-taking behavior. Analyses for the Substance Use Cost Calculator of the National Survey on Drug Use and Health (NSDUH) finds workers with SUDs to be much more likely to be risk-takers than their peers on several self-report questions. For example, 35% of workers with an SUD responded "always" or "sometimes" in response to the question, "How often do you like to test yourself by doing something a little risky?" Only 13% of workers with no SUD and 20% of workers in recovery responded similarly.

Doing risky things differentiates workers with and without SUDs for all age groups: 48% vs. 21% for 18-24-year-olds; 35% vs. 21% for 25-34-year-olds; 29% vs. 11% for 35-49-year-olds; 22% vs. 11% for 50-64-year-olds. Comparisons of males and females with and without SUDs show similar patterns: males 37% vs. 17%; females 30% vs. 8%.

In another instance, 43% of workers with an SUD responded "always" or "sometimes" in response to the NSDUH question, "How often do you get a real kick out of doing things that are a little dangerous?" Only 17% of those with no SUD and 26% of those in recovery responded similarly.

Reported behaviors behind the wheel of a car exhibit similar patterns. The majority (59%) of workers with an SUD reported driving at least once in the past year under the influence of alcohol or drugs. By contrast, 10% of workers with no SUD and 14% of workers in recovery reported driving under the influence. Workers with an SUD were more likely to report never or seldom wearing a seat belt when driving (7%), but only 3% of workers with no SUD and 6% of workers in recovery reported never or seldom wearing a seat belt.

## Returning to Work: What Employers Can Do

Employers have tools to reduce substance use-related risks of injury and illness, lengths of disability, workers' compensation and associated treatment costs, and promote successful return to work. These tools could be, but are seldom, used.

- *Health insurance:* 97% of businesses with more than 50 workers offer at least some of their employees individual health insurance options, and more than 25% offer family health insurance options.<sup>xxiv</sup> Since 2008, the Mental Health Parity and

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Addiction Equity Act of 2008 (MHPAEA)<sup>xxv</sup> generally prevents group health plans and employment-sponsored health insurance plans that provide mental health and substance use benefits from imposing less favorable benefit limitations on those benefits than on medical/surgical benefits. The Affordable Care Act requires all health plans offered in the marketplace to provide mental health and substance use treatment benefits as an essential benefit at parity with other health benefits.<sup>xxvi</sup> Half of employed NSDUH respondents were aware that their health insurance plans covered alcohol or drug benefits.

- *EAPs*: 60% of full-time workers have access to an Employee Assistance Program<sup>xxvii</sup>, but only 40% of firms with EAPs have a strategy in place to address workplace behavioral health issues.<sup>xxviii</sup> Only 11% of NSDUH respondents were aware their employer had an EAP and 24% were aware their companies had a written policy on drug and alcohol use. A survey of EAPs found a utilization rate for behavioral health services of only 4.5% of the covered employees, far fewer than the prevalence of substance use and mental health problems in typical workforces.<sup>xxix</sup>
- *Disease and disability management*: 29% of all firms and 68% of firms with 200 or more employees offer a disease management program.<sup>xxx</sup> In 2018, 42% of private industry workers had access to short-term disability insurance plans and 34% to long-term plans. Twenty-six percent of state and local government workers had access to short-term coverage and 38% to long-term benefits.<sup>xxxi</sup> A 2019 survey by the Disability Management Employers Coalition (DMEC) of benefits managers revealed that only 13% relied on an external disability management program to assist in return to work, and 17% have specific RTW strategies for employees on leave due to a behavioral health issue.<sup>xxxii</sup>

Employers can exercise influence on the performance of their health plans, EAPs, disease management and disability management vendors. For over 15 years, the National Alliance for Healthcare Purchasing Coalitions<sup>xxxiii</sup> has systematically collected employer-driven quality information from health plans. The eValue8 performance evaluation tool sets consistent, evidence-based employer expectations, and measures how health plans across the country measure up. The eValue8 “2018 Mental Health Deep Dive”<sup>xxxiv</sup> laid out employer expectations and assessment plan performance in their support provided to primary care physicians who treat the majority of people with behavioral health issues, use of EAPs to support employees with behavioral health problems impacting job performance, opioid pain medication management by pharmaceutical benefits manager and compliance with MHPAEA. Employers can also

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work in regional or national coalitions of employers to bring the combined purchasing power and influence of employers to improve SUD benefits for their employees. These groups include state business coalitions on health, the national Business Group on Health,<sup>xxxv</sup> the Center for Workplace Mental Health,<sup>xxxvi</sup> the Disability Management Employer Coalition,<sup>xxxvii</sup> and the National Safety Council.

Alcohol and drug use by employees present challenges to employers. However, employers have tools – both within their own businesses and through working with other employers – that can reduce the likelihood of substance use-related illness and injuries, reduce short- and long-term disability impacted by substance use, and assist workers return to work. As demonstrated by the Calculator, workers in recovery use less unscheduled leave for illness and injury, are less likely to turn over, use fewer health care services and cost much less than their peers whose substance use is untreated.

<sup>i</sup> Leigh JP. Economic burden of occupational injury and illness in the United States. *Milbank Q* 2011;89:728–72. 10.1111/j.1468-0009.2011.00648.x

<sup>ii</sup> Alcohol and Public Health: Alcohol-Related Disease Impact (ARDI) [https://nccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://nccd.cdc.gov/DPH_ARDI/default/default.aspx)

<sup>iii</sup> Degenhardt L, Charlson F, Ferrari A, Santomauro D, Erskine H, Mantilla-Herrera A, Whiteford H, Leung J, Naghavi M, Griswold M, Rehm J. The global burden of disease attributable to alcohol and drug use in 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Psychiatry*. 2018 Dec 1;5(12):987-1012. <https://www.thelancet.com/action/showPdf?pii=S2215-0366%2818%2930337-7>

<sup>iv</sup> <https://pubs.niaaa.nih.gov/publications/surveillance111/Cirr15.pdf>

<sup>v</sup> [https://nccd.cdc.gov/DPH\\_ARDI/Default/Report.aspx?T=AAM&P=1A04A664-0244-42C1-91DE-316F3AF6B447&R=B885BD06-13DF-45CD-8DD8-AA6B178C4ECE&M=32B5FFE7-81D2-43C5-A892-9B9B3C4246C7&L=&F=AAMCauseAgeGroupAllNew&D=H](https://nccd.cdc.gov/DPH_ARDI/Default/Report.aspx?T=AAM&P=1A04A664-0244-42C1-91DE-316F3AF6B447&R=B885BD06-13DF-45CD-8DD8-AA6B178C4ECE&M=32B5FFE7-81D2-43C5-A892-9B9B3C4246C7&L=&F=AAMCauseAgeGroupAllNew&D=H)

<sup>vi</sup> Jones, C.M.; Paulozzi, L.J.; and Mack, K.M. Alcohol involvement in opioid pain reliever and benzodiazepine drug abuse-related emergency department visits and drug-related deaths—United States, 2010. *Morbidity and Mortality Weekly Report* 63(40):881–885, 2014. PMID: 25299603

<sup>vii</sup> [https://nccd.cdc.gov/DPH\\_ARDI/Default/Default.aspx](https://nccd.cdc.gov/DPH_ARDI/Default/Default.aspx)

<sup>viii</sup> <https://www.cdc.gov/alcohol/faqs.htm>

<sup>ix</sup> Virtanen M, Ervasti J, Head J, Oksanen T, Salo P, Pentti J, Kouvonen A, Väänänen A, Suominen S, Koskenvuo M, Vahtera J. Lifestyle factors and risk of sickness absence from work: a multicohort study. *The Lancet Public Health*. 2018 Nov 1;3(11):e545-54.

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