

Characterizing Injuries among Kentucky Distillery Workers

The Challenge

Kentucky ranks first in distillery industry production and employment in the United States, producing one-third of this industry's beverages and employing 31% of all distillery workers. Little has been published pertaining to worker non-fatal and fatal injuries in the distillery industry; however, among general beverage manufacturers, the Bureau of Labor Statistics reported that workers experienced a rate of work-related injury at 5.2 per 100 full-time equivalent workers in 2017, 68% higher than the national average rate for all workers.



The Response

In collaboration with the Central Appalachian Regional Education and Research Center (CARERC), the Kentucky Occupational Safety and Health Surveillance (KOSHS) program analyzed Kentucky workers' compensation first report of injury records (FROIs) to identify the most frequent type, nature, and cause of work-related injuries among distillery workers and the contributing factors for these events. During the study period of 2010-2019, 974 FROIs were recorded, with 908 (93.2%) of the injuries resulting in lost time, 65 (0.07%) resulting in no lost time, and one resulting in death. This study was published in the *American Journal of Industrial Medicine* in Spring 2022 (Mirzaian M, Sanderson W, Browning S, Bunn T. workers' compensation reported injuries among distillery industry workers, 2010–2019; 65(6):483–491).

The Impact

Study findings showed that the most common injuries among Kentucky distillery workers were strains or tears, lacerations, and contusions. The most frequently injured body parts included the shoulders, fingers, low back area, and knees, with the majority of injuries due to contact with objects or machinery, bodily reaction, and overexertion. The largest number of FROIs occurred among barreling employees—those who cleaned, filled, and transported the barrels—with repetitive motion injuries being the most common. The findings suggest a need to target barreling employees for safety interventions to reduce future injuries, including implementing engineering controls, such as the use of mechanical devices to assist in barrel handling. Additionally, providing distillery workers with adequate breaks and encouraging job rotation could reduce the frequency of repetitive motion injuries. In response to this study, the CARERC partnered with the James B. Beam Institute to host three trainings on barrel safety, ergonomics, and emergency response. Safety personnel from 17 distilleries, along with representatives from state associations and industry consultants attended the trainings. Evaluations indicated that participants increased their health and safety knowledge and intended to change related practices at their organizations based on the knowledge gained from the trainings.

For more information, visit the CARERC and KOSHS websites:

- <https://www.uky.edu/erc/>
- <https://kiprc.uky.edu/programs/kentucky-occupational-safety-and-health-surveillance-koshs-program>