

# Alcohol-Related Hospitalizations Jumped Amid COVID, with Women Experiencing Some of the Greatest Impacts

Increases in both excess alcohol consumption and alcoholic-related deaths in the United States over the past two years highlight the adverse effects of the COVID-19 pandemic. According to a March 2022 article in the Journal of the American Medical Association (JAMA), the rate of alcohol-related deaths in the United States increased by approximately 30 percent from 2019 to 2020, with the largest increase among those aged 35 to 44<sup>1</sup>.

While alcohol can impact various organs and organ systems, it can have a particularly detrimental effect on the liver. Alcoholic liver disease – including fatty liver, alcoholic hepatitis, and cirrhosis (a potentially irreversible and life-threatening condition) – can result from chronic alcohol abuse<sup>2</sup>.

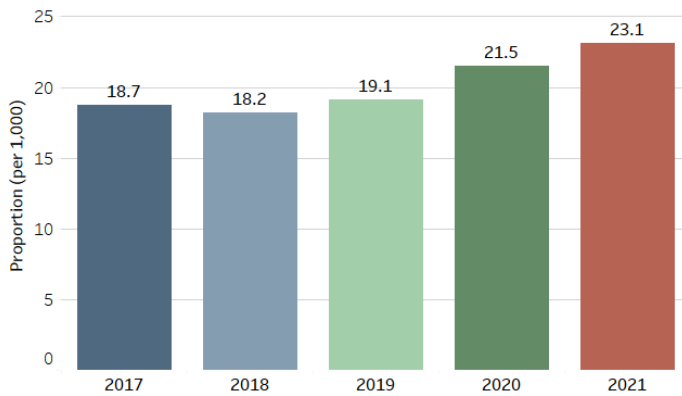
In this paper, NJHA’s Center for Health Analytics, Research and Transformation (CHART) identifies troubling trends on the impact of alcohol consumption in New Jersey since the pandemic, including double-digit increases in alcoholic liver disease-related hospitalizations and deaths, and a disproportionate impact on women as they juggled the demands of the pandemic.

## What Trends in Hospitalizations Reveal

According to New Jersey Hospital Discharge data, the proportion of total hospitalizations with either a primary or secondary diagnosis for alcoholic liver disease increased by approximately 23 percent from 2019 to 2021 (11.9 versus 14.7 per 1,000 hospitalizations, respectively). Females, however, experienced a higher increase – 28 percent (6.1 versus 7.8 per 1,000) – compared with males – 21 percent (19.1 versus 23.1 per 1,000) (Figures 1 & 2). The actual number of alcoholic liver disease-related hospitalizations increased by approximately 19 percent during the same period – 18 percent among males (7,866 versus 9,315, respectively) and 22 percent among females (3,173 versus 3,873) (Figures 3 & 4). While diagnoses for alcoholic liver disease were more common among males, the percent increase in both the number and proportion of these disorders was greater for females.

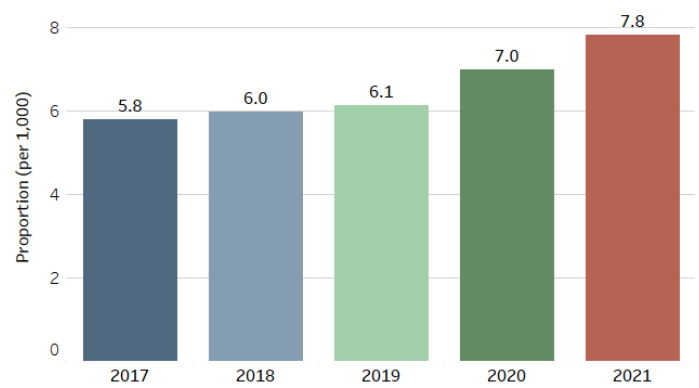
**Figure 1**

Proportion of Alcoholic Liver Disease-Related Hospitalizations (Males), per 1,000



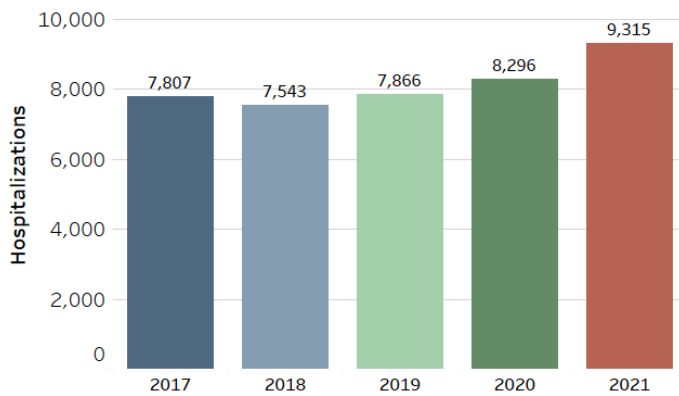
**Figure 2**

Proportion of Alcoholic Liver Disease-Related Hospitalizations (Females), per 1,000



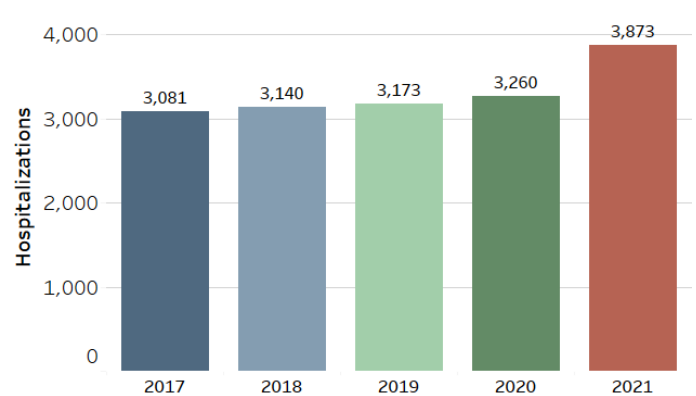
**Figure 3**

Number of Alcoholic Liver Disease-Related Hospitalizations (Males)



**Figure 4**

Number of Alcoholic Liver Disease-Related Hospitalizations (Females)



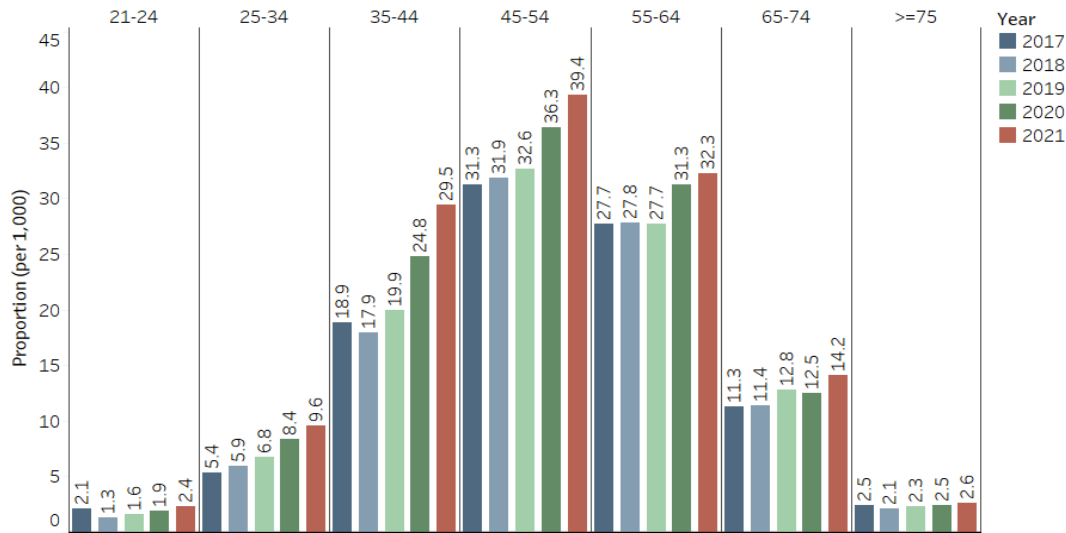
Source: New Jersey Hospital Discharge Data

Notes: Diagnoses for alcoholic liver disease include all categories of ICD-10 codes K70

The prevalence of alcoholic liver disease-related hospitalizations was highest among those aged 45 to 54 from 2017 through 2021. The proportion of alcoholic liver disease-related hospitalizations increased in 2021 for all age groups between the ages of 25 to 74 compared with previous years. The largest increases between 2019 and 2021, however, were among those aged 35 to 44 (approximately 48 percent) and those aged 25 to 34 (41 percent) (Figure 5).

**Figure 5**

**Proportion of Alcoholic Liver Disease-Related Hospitalization by Age Group, per 1,000**



Source: New Jersey Hospital Discharge Data

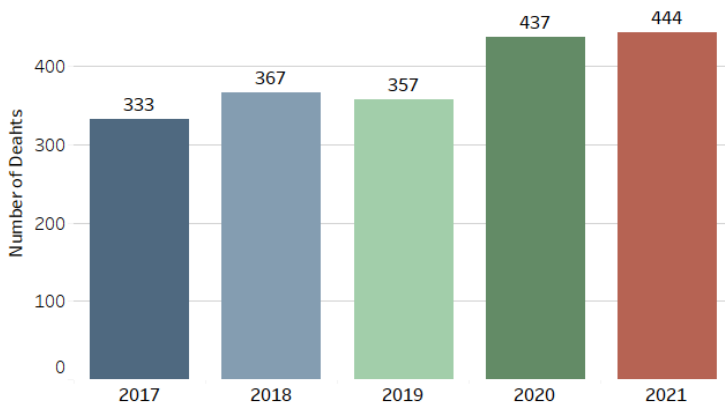
### The Impact of Alcohol Use on Mortality in New Jersey

According to New Jersey State Health Assessment data, alcoholic liver disease was the primary cause of death among 357 New Jerseyans throughout 2019, increasing to 437 and 444 deaths in 2020 and 2021, respectively (Figure 6). The age-adjusted death rate for alcoholic liver disease in New Jersey increased by approximately 24 percent from 2019 to 2020 (3.4 versus 4.2 per 100,000, respectively) – age-adjusted rates were unavailable for 2021 (Figure 7).

The number of alcohol-induced, or related, deaths in New Jersey increased by roughly 24 percent (699 versus 866, respectively) from 2019 to 2020 – counts for 2021 were unavailable (Figure 8). Alcohol-induced deaths include deaths from alcoholic heart, liver, nervous system, and pancreas diseases; mental and behavioral disorders due to the use of alcohol; poisonings from alcohol; and other diagnoses.

**Figure 6**

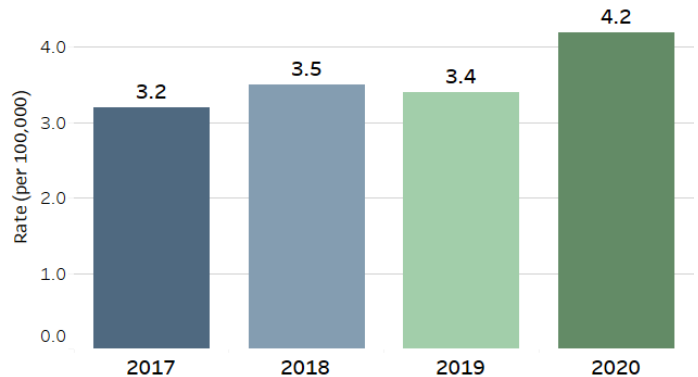
**Deaths from Alcoholic Liver Disease in New Jersey**



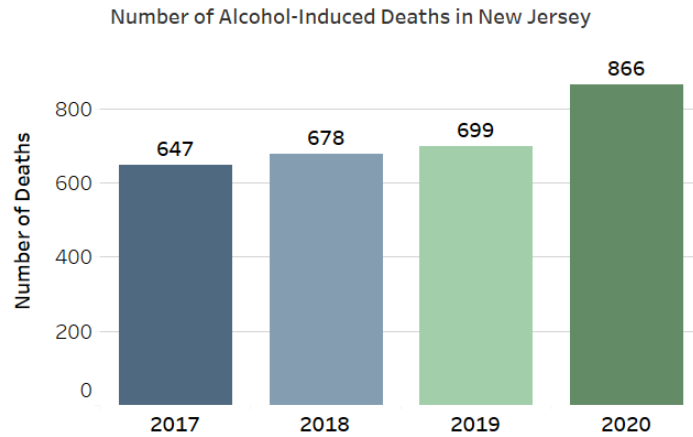
Source: New Jersey Hospital Discharge Data

**Figure 7**

**Age-Adjusted Death Rate from Alcoholic Liver Disease in New Jersey, Per 100,000**



**Figure 8**



### **Trends in Overall Alcohol Consumption**

An increase in alcoholic liver disease during the pandemic highlights the potentially dangerous upward trends in alcohol consumption identified by researchers. Throughout the United States, liquor store sales increased by approximately 20 percent – or \$41.9 billion – in March to September 2020 compared with the same period in 2019, according to a November 2021 study by the Columbia University Mailman School of Public Health<sup>3</sup>. Due to the uptick in home sales of alcohol in New Jersey, the state treasury expects to collect an additional \$25.9 million in alcohol tax revenue than predicted, according to the state’s 2022 Fiscal Year budget<sup>4-5</sup>.

Using data from over 800 survey respondents (84 percent of whom were women), researchers from John Hopkins and the University of Maryland found that respondents who reported pandemic-related stresses were more likely to consume a greater number of drinks. Overall, 60 percent of respondents reported consuming more alcohol than prior to the pandemic<sup>6</sup>.

Another report published by JAMA in September 2020 found that survey respondents – a national representative sample – increased their alcohol consumption by approximately 14 percent compared with 2019. According to the same study, the number of days women reported heavy drinking (four or more drinks in a few hours) increased by roughly 41 percent during the same period<sup>7</sup>.

The increasing prevalence of alcohol consumption among females is especially concerning given the unique impacts the pandemic had on working-aged women – particularly those with children<sup>8-17</sup>. Women were more likely to take on additional household and parental responsibilities brought about by the pandemic, such as caring for children who were unable to attend school and daycare early in the pandemic<sup>15-17</sup>.

According to an October 2020 data analysis by The New York Times, nearly 900,000 mothers with children between the ages of 5 and 17 have left the workforce since February 2020, compared with 300,000 fathers<sup>15</sup>. The U.S. National Pandemic Emotional Impact Report also found that women were more prone to pandemic-related changes in productivity, sleep, and mood, while women with minors – under 18 years – reported higher rates of anxiety compared with their male counterparts<sup>16</sup>. Aside from additional household or childcare stressors, the impacts of alcohol on the liver system can also manifest more quickly in women than men as women metabolize alcohol at a different rate<sup>17</sup>.

### **Discussion**

COVID-19’s mental health toll has been well documented, including in a prior CHART report<sup>18</sup>. However, the mental and emotional impacts from the COVID-19 pandemic may also manifest into increased substance use – particularly alcohol consumption. Additionally, the closing of rehab and detoxification centers – along with social support groups –

during the early pandemic was likely detrimental to many of those with substance abuse issues. Helping those with alcohol use issues access the resources they need will be vital to helping them manage both their behavioral and mental health needs.

The increasing prevalence of alcoholic liver disease among New Jersey's inpatient population is especially concerning as these disorders can cause further complications, placing additional strains on healthcare resources. Aside from the direct physical impacts of the coronavirus, the pandemic's indirect toll on the mental and emotion wellbeing of individuals may lead to a further deterioration in the health of New Jersey's population.

*Footnotes:*

1. <https://jamanetwork.com/journals/jama/fullarticle/2790491>
2. <https://my.clevelandclinic.org/departments/digestive/medical-professionals/hepatology/alcoholic-liver-disease>
3. <https://www.publichealth.columbia.edu/public-health-now/news/study-shows-uptick-us-alcohol-beverage-sales-during-covid-19-pandemic#:~:text=From%20March%20to%20September%202020,August%20to%20February%202020%2C%20respectively>
4. [N.J. residents are drinking and smoking more during the pandemic, and the proof is in Murphy's new state budget - nj.com](https://www.nj.com/news/politics-and-governance/story/NJ-residents-are-drinking-and-smoking-more-during-the-pandemic,-and-the-proof-is-in-Murphy-s-new-state-budget-101787700.html)
5. <https://www.nj.gov/treasury/omb/publications/22budget/pdf/FY22GBM.pdf>
6. <https://www.mdpi.com/1660-4601/17/24/9189/htm>
7. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770975?widget=personalizedcontent&previousarticle=187>
8. <https://www.nytimes.com/2020/10/03/style/am-i-drinking-too-much.html>
9. <https://www.npr.org/2020/10/28/928253674/stuck-at-home-moms-the-pandemics-devastating-toll-on-women>
10. <https://www.nytimes.com/2021/04/12/well/mind/covid-pandemic-drinking.html>
11. <https://www.apa.org/news/press/releases/2021/03/one-year-pandemic-stress>
12. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8327759/>
13. <https://www.nytimes.com/2021/04/19/upshot/alcohol-deaths-pandemic.html>
14. <https://www.nytimes.com/2021/04/21/magazine/covid-drinking-alcohol-health.html>
15. <https://www.nytimes.com/2020/10/29/upshot/mothers-leaving-jobs-pandemic.html>
16. [https://www.pandemicimpactreport.com/report/PalssonBallouGray\\_2020\\_PandemicImpactReport.pdf](https://www.pandemicimpactreport.com/report/PalssonBallouGray_2020_PandemicImpactReport.pdf)
17. <https://www.npr.org/sections/health-shots/2021/03/16/973684753/sharp-off-the-charts-rise-in-alcoholic-liver-disease-among-young-women>
18. <https://www.njha.com/media/698829/mental-health-disorders-among-teens-6-15-22.pdf>

Visit [www.njha.com/chart](http://www.njha.com/chart) for additional resources.