COVID Reflections

Impact of COVID-19 on Excessive Alcohol Use in North Carolina

Excessive alcohol use, already problematic in North Carolina, has increased markedly during COVID-19. Alcohol-related morbidity and mortality have also increased.

Introduction

The COVID-19 pandemic has dramatically increased the prevalence and acuity of substance use disorders (SUD) in North Carolina and the nation. The effect on opioid overdose deaths in North Carolina is well documented: overdose death rates increased 40% between the 12-month period ending 2019 and the 12-month period ending 2020, and preliminary data indicate this trend has only gotten worse [1]. Less well known is the marked increase in excessive alcohol use and related harms during this period.

Excessive alcohol use prior to COVID-19 was already problematic, warranting selection as one of the targeted outcome measures for Healthy North Carolina 2030 [2].

Excessive use includes exceeding weekly drinking limits (> 7 drinks for women/men aged 65+ years and > 14 drinks for men aged < 65), binge drinking (> 3 drinks for women/men aged 65+ years on one occasion and > 4 drinks for men aged < 65 on one occasion), and any drinking in pregnant women and youth under 21. Ninety percent of individuals with excessive use are not alcohol dependent but instead exceed weekly drinking guidelines or engage in binge drinking [3]. Excessive drinking is associated with over 200 diseases and injuryrelated health conditions (including COVID-19 requiring hospitalization or causing death) and places the individual at risk for developing alcohol dependence [3].

Beginning in Spring 2020 alcohol use in North Carolina and across the nation increased dramatically as stay-at-home orders were instituted. A RAND national study published in 2020 provided evidence of changes in alcohol use and associated consequences. The study documented that compared with 2019 baselines, frequency of alcohol consumption increased 14% overall, and that for adults aged 30–59 years, drinking increased 19% [4]. This same study reported a 41% increase in heavy drinking days for women [4]. In a cross-sectional survey of US adults, 34.1% of participants reported binge drinking and 7% reported "extreme" binge drinking relative to the time before COVID [5].

Much of the increased drinking during the pandemic has been attributed to stress, and individuals reporting "very much" or "extreme" COVID-19-related stress consumed significantly more than other participants [5]. Other reasons cited were boredom and fewer alternative activities [6].

The link between psychological distress and problematic alcohol use has been well established, and they often co-occur. Quarantine/lockdown measures, as well as the loss of loved ones, led to prolonged grief, social isolation, job/school loss, economic hardship, family stressors, and other dysfunction. These losses significantly impacted mental health, leading to increased rates of anxiety, depression, post-traumatic stress disorder, self-harm, and suicide [7].

An RTI International study of 55,000 adults in the United States looked at precisely how consumption changed between February 2020 and April 2020 and found that average drinks per day

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increased 29%, the percentage of people exceeding drinking guidelines increased 20%, and the percentage of people binge drinking increased 21% [6]. The increases were consistent across demographic groups, with the largest differences in the proportion exceeding drinking limits, with greater increases for women compared to men and for non-Hispanic Black respondents compared to non-Hispanic white respondents. Findings for respondents with children living at home were particularly dramatic: these individuals were over 2.5 times more likely than respondents without children at home to exceed weekly guidelines and 4 times more likely to report binge drinking [6].

As alcohol consumption increased in the first year of the pandemic, related harms did as well, including increased transplants for liver disease and emergency department visits for alcohol withdrawal [8]. Alcohol-related deaths in the United States spiked more than 25% in the first year of the pandemic; spikes occurred across age groups, with the most dramatic changes taking place in the group aged 35–44 (a nearly 40% increase) [8]. Deaths due to alcohol-associated liver disease increased 22.4% between 2019 and 2020 and the number of deaths with an underlying cause of alcohol-related mental and behavioral disorders increased 35.1% [8]. There were also increases in the number of deaths in which alcohol contributed to overdoses of opioids (40.8%), and synthetic opioids specifically (59.2%) [8].

Excessive Alcohol Use Amid COVID-19 in North Carolina

While most of the research has utilized national samples, there are some state-specific data that elucidate the impact of COVID-19 on excessive alcohol use in North Carolina. Alcohol sales increased markedly during the pandemic. The uptick started immediately, accounting for a 12% increase in Alcoholic Beverage Control (ABC) Commission alcohol sales in North Carolina for the fiscal year ending June 30, 2020, compared with the year before (even though the pandemic wasn't a factor until the last 3.5 months of the period) [9]. ABC monthly sales were 22% higher in February 2022 compared with February 2020 before the pandemic began [9].

Overall, North Carolina emergency department (ED) utilization dropped markedly early in the pandemic, but the proportion of visits for substance use and mental health issues increased from 2019 to 2020. In fact, the proportion of alcohol-related ED visits increased 13%, from 1.8% of 2019 ED visits to 2% of 2020 ED visits (Figure 1) [10]. Not captured in these numbers, but likely to follow, are the many longer-term sequelae of excessive alcohol use, including the development of alcohol dependence as well as many chronic health conditions, injuries, and certain cancers.

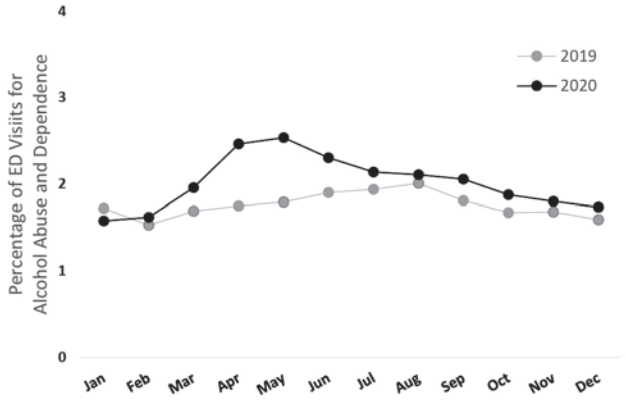
Beyond the health consequences, excessive alcohol use also contributes to domestic violence,

FIGURE 1.
Alcohol Misuse and Dependence ED Visits, NC Residents, 2019–2020

The number of ED visits for alcohol misuse and dependence was similar in 2020 to years prior, but the proportion of alcohol-related ED visits **increased 13%,** from 1.8% of 2019 visits to 2.0% of 2020 visits. The count decreased from 86,043 in 2019 to 79,261 visits in 2020.

These visits are for alcohol withdrawal, alcohol dependence, and other complications caused by alcohol dependence.

Excessive alcohol consumption also contributes to acute and chronic health outcomes, including injuries, cirrhosis, and certain cancers. These outcomes are not captured by this definition, so NC DHHS will continue to monitor for these impacts.



Source. NC DETECT (statewide ED data), NC Division of Public Health & Carolina Center for Health Informatics, UNC Department of Emergency Medicine (UNC DEM), 2019-2020. Syndrome definition: https://ncdetect.org/case-definitions/.

child maltreatment, and a host of other individual, family, and societal impacts [11]. Excessive drinking is estimated to have cost North Carolina $9.72 billion in 2017, and that figure is most likely well below the estimated cost post-COVID-19 [11].

Data from the Alcohol/Drug Council of North Carolina indicate that there was an uptick in calls to its information and referral phone line for individuals inquiring about treatment. For alcohol use disorder alone, there was an 18% increase between 2019 and 2020 (3513 versus 4148) and an additional 8% increase between 2020 and 2021 (4148 versus 4500) (personal communication with Rebecca Sweeting, Data and Systems Team Lead at Alcohol Drug Council of NC, April 14, 2022).

Social distancing and other measures restricted access to treatment and recovery networks, both formal and informal, and we know these connections are very important to individuals in treatment and recovery. While telemedicine opportunities were developed and expanded expeditiously, these solutions are not available to everyone equally, nor do they offer the engagement and continuity many patients require [12]. Individuals with SUD, already a marginalized group, often lacked digital connectivity and/or were not in living or working situations that afforded access [13]. The full extent to which the pandemic negatively affected timely access to treatment and recovery services is unclear.

Excessive Alcohol Use Among Young Adults Amid COVID-19

An additional important question is whether the increase in excessive drinking extended to adolescents and young adults. This is of particular importance because there are both acute and longer-term impacts of adolescent alcohol use, including progression to a SUD. Early alcohol use is associated with alcohol use disorder in adulthood as well as with more mental health issues [14]. The adolescent brain is particularly vulnerable to alcohol, predisposing young drinkers to alcohol use, mental health, and neurocognitive problems that can persist into adulthood [15, 16]. According to data collected in the (pre-pandemic) Spring 2020 Monitoring the Future (MTF) survey, and in a subsequent survey collected between mid-July and mid-August 2020, adolescent binge drinking (and marijuana use) did not change significantly in the United States during the pandemic despite adolescents reporting dramatic decreases in availability [17]. Another study, of adolescents aged 10–14 across the United States, indicates that overall alcohol use declined compared to pre-pandemic use, but substance use in general was higher among adolescents in families that experienced more stress due to loss and material hardship during COVID-19 [18]. One study of Canadian adolescents found a 49.3% increase in the number of adolescents engaging in solitary substance use [19].

According to research on the effects of campus closure and residential change, the impact of COVID-19 on drinking behaviors for college students varied depending on their living situation. As a result of less time spent in social settings with peers and increases in direct parental supervision, students who had been living with peers and returned home to live with parent had a markedly reduced number of drinking days per week, number of drinks per week, and maximum drinks in one day [20]. College students who continued to live as they did pre-pandemic reported increased drinking days [20].

Conclusion

The staggering effect of the pandemic on excessive alcohol use and the associated harms and deaths is undeniable. Despite the existence of effective vaccines and therapeutics, COVID-19 continues to be an imposing public health challenge and many of the associated situational and mental health stressors continue as well. According to the CDC, using provisional data from January 2019 through the first half of 2021, alcohol- related deaths peaked in January 2021 [8]. Despite a loosening of earlier lockdown measures and isolation, in June 2021 40% of surveyed US adults reported struggling with symptoms of mental or substance use disorder, including anxiety/depressive symptoms (31%); starting or increasing substance use (13%); trauma/stressor-related disorder symptoms (26%); and seriously considering suicide (11%) [21]. It is unclear if alcohol use patterns and alcohol-related morbidity and mortality will decline as we move forward. Dr. George Koob of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) warns, "Transition to a post-pandemic reality will itself be a likely source of new

stressors and anxieties as society adjusts to a new 'normal'" [22]. NCMJ.

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