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DATA BRIEF: ALCOHOL DEATH RATES DURING THE COVID-19 PANDEMIC

On January 31, 2020, COVID-19 was declared a public health emergency; on March 11, it was declared a pandemic.[i] The implementation of stay-at-home restrictions, mask-wearing, disruption in routines, and social distancing, coupled with societal and economic disruption, altered life, as we knew it. COVID-19-related stressors led to a range of negative psychological effects, including posttraumatic stress, anxiety, and depression.[ii,iii,iv,v]

During the pandemic, alcohol use and dependency also increased. For example, researchers found that legal-aged adults consumed an average of 26.7 alcoholic drinks over the past 30 days once the pandemic began—a notable increase from an average of 12.0 drinks pre-pandemic.[vi] The percentage of heavy drinkers increased from 20.9 percent before the pandemic to 25.7 percent during the pandemic.[vii]

As consumption increased, so too did the negative consequences of increased use, including increases in alcohol-related emergency department visits,[viii] alcohol-related liver disease,[ix,x] and alcohol-related death.[xi,xii,xiii]

While death from alcohol-related causes is an extreme consequence for misuse, death data offer substance misuse prevention planners an important lens into the scope of the alcohol-related problems in their community and can play a key role in prevention planning. For example, knowing where deaths have been occurring geographically can help prevention practitioners determine where to concentrate their efforts, and ensure that strategies cover those areas most affected. Furthermore, knowing which populations are most affected allows preventionists to tailor their prevention approaches to best meet the needs of these groups.

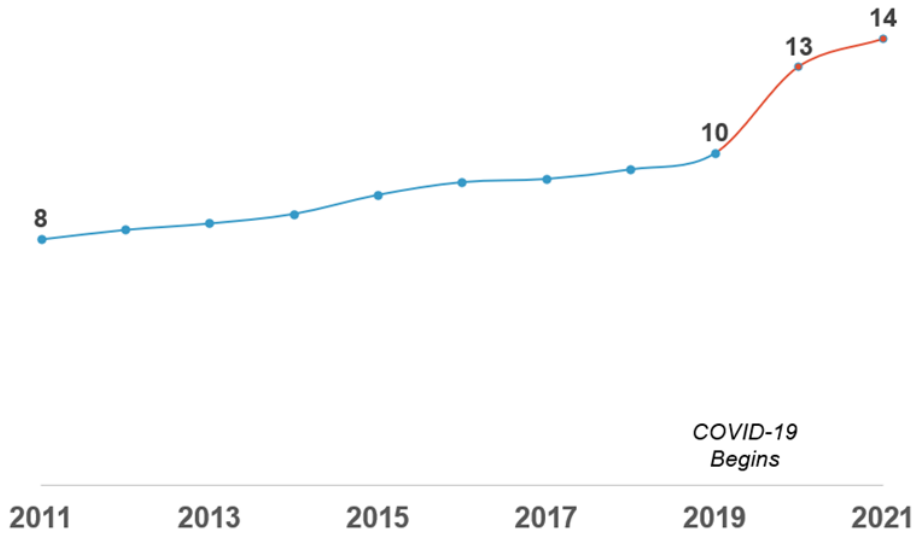
This data brief presents U.S. alcohol-related death data from 2018 to 2021, looking particularly at the years since and during the COVID-19 pandemic. Data were drawn from the Centers for Disease Control and Prevention's Wide-ranging Online Data for Epidemiologic Research (WONDER) database. Alcohol-related death rates include a national, state, and county

perspective; gender and age comparisons; and differences in death rates by rural-urban settings. All rates are per 100,000.

ALCOHOL-RELATED DEATH RATES, OVERALL

Between 2011 and 2021, age-adjusted U.S. alcohol-related death rates showed a slight increase—from 8 per 100,000 to 10 per 100,000. However, after the COVID-19 pandemic "officially" started on March 11, 2020, the age-adjusted alcohol-related death rates increased from 10 to 14 per 100,000 by 2021 (see Figure 1).

Figure 1. U.S. Age-Adjusted Alcohol-Related Death Rates per 100,000 (2011-2021)

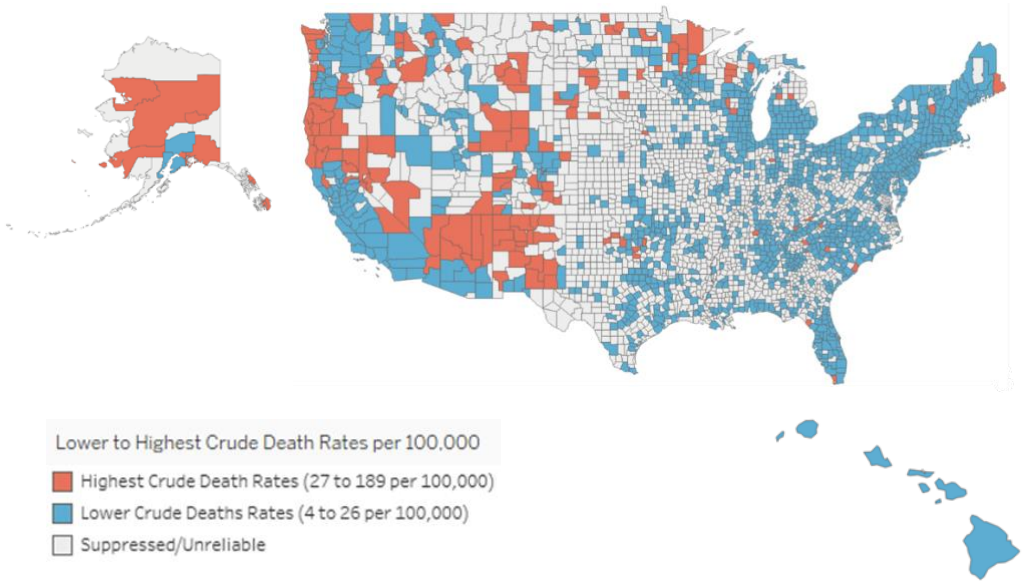


CRUDE ALCOHOL-RELATED DEATH RATES, BY LOCATION NATIONWIDE

Between 2018 and 2021, alcohol-related death rates varied considerably by location, ranging from 4 to 189 per 100,000. The highest[1] rates were clustered in the western U.S., Alaska, and the upper Midwest; the lowest rates were in the northeast, suggesting that there are areas of the country more acutely impacted by alcohol deaths than others (see Figure 2). Prevention practitioners can use these data as a key finding in their needs assessments and as a springboard for priority setting, especially if they are located in areas with high alcohol-related mortality.

[1] Crude rates were classified into octiles or 8 categories. Rates in the 1st to 7th octiles (range from 4 to 26 per 100,000) were labeled lower crude death rates (blue shading) and rates in the 8th octile (range from 27 to 189 per 100,000) were labeled as highest death rates (orange shading).

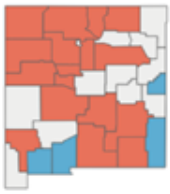
Figure 2. National Perspective of Crude Alcohol-Related Deaths per 100,000 (2018-2021)

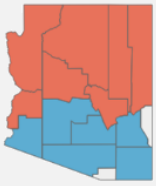
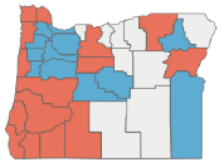
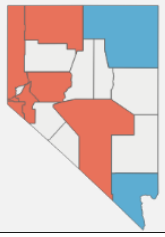
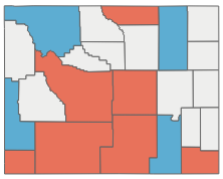
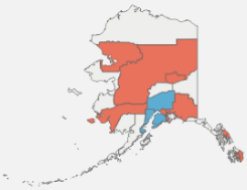
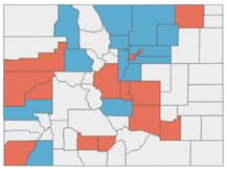


CRUDE ALCOHOL-RELATED DEATH RATES, BY COUNTY

Examining death rates by county can help practitioners further focus their prevention efforts (see Figure 3). For example, a group of counties with a large number of deaths (especially if they are contiguous) could mean that alcohol is easy to access, that there are limited regulations in place to prevent alcohol-related problems, or that people accept excessive or underage drinking as normal behavior. States with at least 20% of their counties in the high alcohol-related death range included: New Mexico (52%), Arizona (47%), Oregon (42%), Nevada (41%), Wyoming (30%), Alaska (28%), and Colorado (20%) (see Appendix A for a listing of states with at least one county in this range).

Figure 3. States with At Least 20% of Counties in High Alcohol-Related Death Rate Range (2018–2021)

Name of State	Affected Counties	% Counties in Highest Death Range	Range per 100,000
New Mexico 	Otero, Eddy, Grant, Chaves, Santa Fe, Sandoval, Lincoln, Bernalillo, Valencia, Colfax, Socorro, Taos, San Miguel, Cibola, Rio Arriba, San Juan, McKinley	**52**	**27–159**

Name of State	Affected Counties	% Counties in Highest Death Range	Range per 100,000
Arizona 	Yavapai, Mohave, Coconino, Gila, La Paz, Navajo, Apache	**47**	**28–110**
Oregon 	Baker, Clatsop, Columbia, Coos, Curry, Douglas, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Tillamook, Umatilla, Wasco	**42**	**27–53**
Nevada 	Carson City, Churchill Douglas, Humboldt, Lyon, Nye, Washoe	**41**	**28–45**
Wyoming 	Carson, Fremont, Laramie, Natrona, Sheridan, Sweetwater, Uinta	**30**	**27–85**
Alaska 	Bethel, Fairbanks North Star, Juneau, Ketchikan Gateway, Anchorage, Northwest Arctic, Valdez-Cordova, Yukon-Koyukuk	**28**	**30–125**
Colorado 	Alamosa, Delta, Denver, El Paso, Garfield, Logan, Mesa, Montezuma, Otero, Park, Pueblo, Rio Grande, Teller	**20**	**27–70**

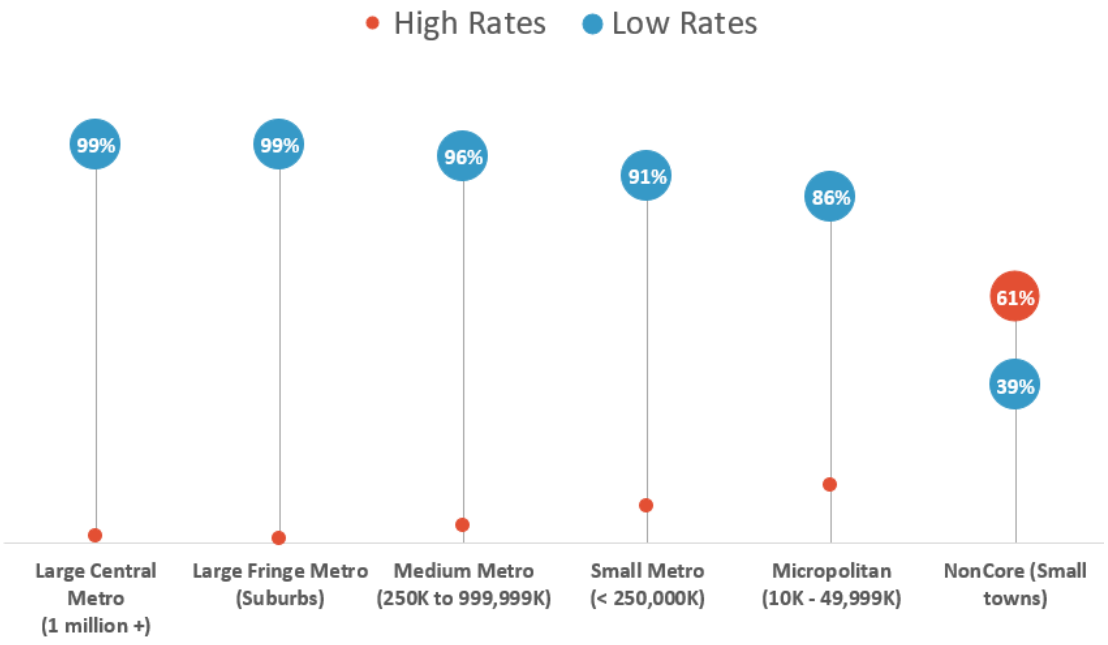
ALCOHOL-RELATED DEATH RATES, BY TYPE OF COUNTY

A review of alcohol-related deaths also revealed relationships between death rates and types of county, as defined by the 2013 National Center for Health Statistics Rural-Urban Continuum Code.[xiv] These classifications included the following: metropolitan (including large central metro, large fringe metro, medium metro, and small metro) and nonmetropolitan (comprising micropolitan and noncore areas).

Analysis revealed that less-populated counties (noncore) had a higher alcohol-related death rate. For example, 39% of noncore counties had death rates in the "low" category compared to 99% of the large central metro counties (see Figure 4.) These findings highlight critical geographic disparities and highlight the importance of discovering what other factors may be present in the community that either contribute to or protect against problematic alcohol use.

For instance, people in smaller towns where rates of alcohol death are high may lack ready access to substance use treatment services or other health care services, or they may be exposed to a higher density of alcohol outlets. Conversely, towns where death rates are lower may have more prevention supports in place, such as a strong prevention coalition. Understanding these factors are key to developing or strengthening prevention programs that are most likely to have an impact.

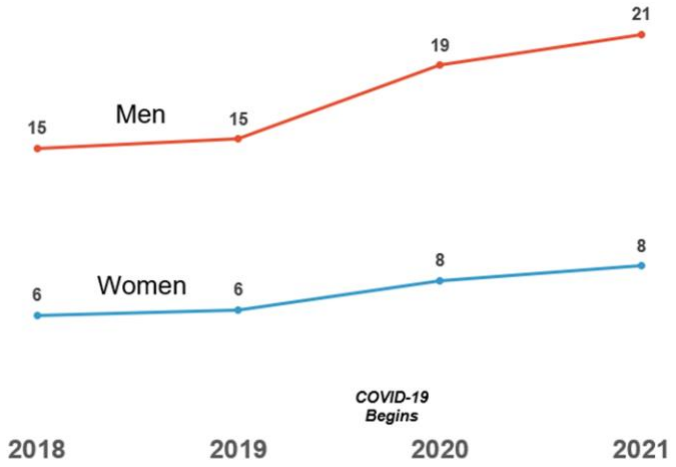
Figure 4. Percentage of High Alcohol-Related Death Rates per 100,000 Across the Rural-Urban Continuum (2018-2021)



ALCOHOL-RELATED DEATH RATES, BY GENDER

Each year between 2018 and 2021 more men died from alcohol-related deaths per 100,000 than women. In 2018 and 2019, these rates remained stable for both men and women (15 and 6 death rates per 100,000, respectively). Starting in 2020, however, the gender gap began to widen, suggesting that men were more affected by alcohol-related issues during the COVID-19 pandemic than women (see Figure 5).

Figure 5. Alcohol-Related Death Rates per 100,000 by Sex (2018-2021)



CONCLUSION

The COVID-19 pandemic produced alarming increases in adult alcohol consumption and related consequences. It remains to be seen whether these rates will continue to rise, plateau, or return to pre-pandemic levels in the years to come. What is currently known, however, is that the impact of these changes, including rates of alcohol-related death, has been significant, and that these impacts are not uniform across communities and populations.

To understand these impacts and the factors that produce them, further investigation is needed, with special attention paid to those geographic areas and communities that experienced disproportionately high rates of alcohol-related deaths. Identifying the root causes, and understanding the contextual factors contributing to these increased rates, is crucial for developing prevention interventions and strategies capable of mitigating these impacts. Additionally, ongoing monitoring will be essential to track trends and assess the effectiveness of interventions in different regions and communities. Ultimately, a comprehensive approach is needed to address the multifaceted challenges posed by the evolving patterns of alcohol consumption and related consequences in the wake of the COVID-19 pandemic.

APPENDIX A

States with At Least One County in the Highest Octile

South Dakota (Shannon County) has the highest alcohol-related death rate in the nation, with 189 per 100,000. This list does not include the counties with over 20% of their counties with the highest alcohol-related death rates previously presented.

Florida
Dixie, Monroe

Georgia
Stephens

Idaho
Kootenai, Nez Perce,
Idaho, Shoshone, Benewah

Maine
Washington

Michigan
Wexford, Roscommon, Dickinson

Minnesota
Polk, Mille Lacs, Douglas, Cass, St Louis, Aitkin, Itasca

Montana
Yellowstone, Silver Bow, Cascade, Lake, Rosebud, Glacier, Big Horn, Roosevelt

Nebraska
Thurston

Nevada
Churchill, Washoe, Nye, Douglas, Lyon, Carson City Humboldt

North Carolina
Ramsey

North Dakota
Macon, Ramsey, Rolette, Benson

Oklahoma
Garvin, Custer, Beckham, Seminole, Carter, Caddo

South Carolina
Georgetown, Union

South Dakota
Pennington, Beadle, Lawrence, Roberts, Todd, Dewey, Corson, Shannon

Tennessee
Hickman, Carter, Anderson

Utah
San Juan

Vermont
Rutland

Virginia
Lee

Washington
Pacific, Walla Walla, Clallam, Jefferson, Grays Harbor, Okanogan

Wisconsin
Columbia, Oneida, Douglas, Lincoln, Adams, Burnett, Vilas

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