

**Name:** Alcohol Related Mortality

**Short Description:** Number of alcohol-related deaths per 100,000 people.

**Data Source(s):**

- **Name:** The Centers for Disease Control and Prevention (CDC) Wide-ranging Online Data for Epidemiologic Research (WONDER)
- **Link to Source:** <https://wonder.cdc.gov/Deaths-by-Underlying-Cause.html>

**Year(s):** 2011-2020

**Source Geographic Level:** County

**Stratification:** Black populations

**Selection Rationale:** Alcohol use disorder (AUD) is an important measure of substance use prevalence contributing to overall mental wellness. Because few people with AUDs perceive a need for care/treatment, it is likely that many people with AUD are not being treated for alcohol dependency.<sup>1</sup> Therefore, a high alcohol-related mortality rate may indicate a significant number of people with untreated AUD.

**Strengths and Limitations**

- **Strengths:**
  - *[Importance]* Deaths from alcohol poisoning vary substantially by state<sup>2</sup> and discharged patients with AUDs face a high risk of subsequent death.<sup>3</sup> This measure shows the geographic variation of alcohol-related mortality.
  - *[Equity]* This measure captures disparities experienced between population groups. Some minority groups (such as Black, Hispanic/Latino, Native, Asian, and Native Hawaiian and Pacific Islander populations) suffer greater adverse effects from alcohol than other populations.<sup>4</sup>

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<sup>1</sup> Edlund, M. J., Booth, B. M., & Feldman, Z. L. (2009). Perceived need for treatment for alcohol use disorders: results from two national surveys. *Psychiatric Services*, 60(12), 1618–1628. <https://doi.org/10.1176/ps.2009.60.12.1618>

<sup>2</sup> Kanny, D., Brewer, R. D., Mesnick, J. B., Paulozzi, L. J., Naimi, T. S., & Lu, H. (2015). Vital signs: alcohol poisoning deaths - United States, 2010-2012. *MMWR Morbidity and Mortality Weekly Report*, 63(53), 1238–1242. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4646044/>

<sup>3</sup> Park, S., Hong, J. P., Choi, S. H., & Ahn, M. H. (2012). Clinical and laboratory predictors of all causes deaths and alcohol-attributable deaths among discharged alcohol-dependent patients. *Alcoholism: Clinical and Experimental Research*, 37(2), 270–275. <https://doi.org/10.1111/j.1530-0277.2012.01943.x>

<sup>4</sup> National Institute on Alcohol Abuse and Alcoholism. (n.d.). *NIAAA's Strategic Plan to Address Health Disparities*. National Institutes of Health. <https://pubs.niaaa.nih.gov/publications/HealthDisparities/Strategic.html>

- [*Relevance and Usability*] This measure is easy to understand and can provide information to state- and federal-level policy officials on which geographic areas are experiencing the highest rates of mortality due to alcohol poisoning.
- [*Scientific Soundness*] Mortality data are collected from all death certificates filed in the 50 states and the District of Columbia.<sup>5</sup>
- [*Feasibility*] Data are easily downloadable and accessible through CDC WONDER and are updated annually.
- **Limitations:**
  - [*Equity*] Deaths of nonresidents (nonresident aliens, nationals living abroad, residents of Puerto Rico and other territories of the U.S.) are not reported in this measure.<sup>6</sup>
  - [*Feasibility*] Data are captured for a 10-year period, 2010-2019. This may make it difficult to discern mortality trends over shorter time spans. A 10-year period was selected because when this measure is stratified by race for Black populations alone, using a shorter time period would result in significant suppression of data.
  - [*Scientific Soundness*] CDC WONDER uses mortality data that are provided to the National Vital Statistics System by state registries. State registries collect mortality data from death certificates that contain a single underlying cause of death. Alcohol-related mortality may be undercounted if a coroner lists a more proximate cause as “cause of death.”
  - [*Scientific Soundness*] Data representing fewer than 10 deaths are suppressed, and county-level deaths fewer than 20 people are marked as “unreliable.”<sup>7</sup>
  - [*Scientific Soundness*] The smallest geographic level at which these data are available is the county level, so each Zip Code Tabulation Area (ZCTA) in a given county will have the same value. As a result, ZCTA-level values may be less accurate because it is not possible to differentiate which ZCTAs have higher or lower rates within a county.

## Calculation:

### Overall Population Calculation:

$$\text{Alcohol related mortality}_{\text{Overall}} = \frac{\text{total number of alcohol related deaths}}{\text{total number of individuals}} \times 100,000 \text{ people}$$

### Black Populations Calculation:

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<sup>5</sup> Centers for Disease Control and Prevention. (2021, March 11). *Underlying Cause of Death 1999-2019*. CDC WONDER. <https://wonder.cdc.gov/wonder/help/ucd.html#>

<sup>6</sup> Ibid

<sup>7</sup> Ibid

$$\text{Alcohol related mortality}_{\text{Black}} = \frac{\text{number of alcohol related deaths among Black populations}}{\text{total number of Black individuals}} \times 100,000 \text{ people}$$