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): 2010-2019

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.[1] 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[2] and discharged patients with AUDs face a high risk of subsequent death.[3] 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.[4]

[1] 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

[2] 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/

[3] 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

[4] 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 mortality due to alcohol poisoning.
- [*Scientific Soundness*] Mortality data is collected from all death certificates filed in the fifty states and the District of Columbia. [5]
- [*Feasibility*] Data are easily downloadable and accessible through CDC WONDER and are updated annually.

- **Limitations**:
  - [*Equity*] Deaths of nonresidents (nonresident aliens, nationals living abroad, Puerto Rico residents, and other territories of the U.S.) are not reported in this measure.[6]
  - [*Feasibility*] Data are captured for a 10-year period from 2010-2019. This may make it difficult to discern mortality trends over shorter timespans. 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 less than 10 deaths are suppressed, and county-level deaths less than 20 people are marked as "unreliable".[7]
  - [*Scientific Soundness*] The smallest geographic level at which this data is 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:

$$Alcohol\ related\ mortality_{Overall} = \frac{total\ number\ of\ alcohol\ related\ deaths}{total\ number\ of\ individuals} x\ 100{,}000\ people$$

Black Populations Calculation:

[5] 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#

[6] Ibid

[7] Ibid

$$Alochol\ related\ mortality_{Black} = \frac{number\ of\ alcohol\ related\ deaths\ among\ Black\ populations}{total\ number\ of\ Black\ individuals}\ x\ 100{,}000\ people$$