

Name: Suicide Mortality

Short Description: Number of deaths attributed to suicide 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: An estimate of suicide mortality contributes to an overall understanding of mental well-being in an area. While CDC mortality data are available for only fatal suicide attempts, those who attempt suicide (non-fatal suicides) have been found to experience a range of long-term outcomes such as additional suicide attempts, depression, substance use disorders, legal charges, and imprisonment.¹ Suicide mortality provides additional depth of information alongside a suicidal ideation measure for understanding suicide risk and mental wellness.

Strengths and Limitations:

- **Strengths:**
 - *[Importance]* Suicide mortality is linked to occurrence of various mental health conditions, including schizophrenia spectrum disorder, bipolar disorder, depressive disorders, anxiety disorders, and ADHD.²
 - *[Relevance and Usability]* This measure is easy to understand and can provide information on geographic areas with a high prevalence of fatal suicides.
 - *[Equity]* This measure captures disparities experienced between population groups. Suicide attempts among Black populations have increased in recent years, so this measure can help delineate where they are occurring.³ The

¹ Beautrais, A., Joyce, P., & Mulder, R. (2000). Unmet need following serious suicide attempt: follow-up of 302 individuals for 30 months. In G. Andrews & S. Henderson (Eds.), *Unmet Need in Psychiatry: Problems, Resources, Responses* (pp. 245–255). Cambridge University Press.
<https://doi.org/10.1017/cbo9780511543562.019>

² Yeh, H. H., Westphal, J., Hu, Y., Peterson, E. L., Williams, L. K., Prabhakar, D., Frank, C., Autio, K., Elsis, F., Simon, G. E., Beck, A., Lynch, F. L., Rossom, R. C., Lu, C. Y., Owen-Smith, A. A., Waitzfelder, B. E., & Ahmedani, B. K. (2019). Diagnosed mental health conditions and risk of suicide mortality. *Psychiatric Services*, 70(9), 750–757. <https://doi.org/10.1176/appi.ps.201800346>

³ National Institute of Mental Health. (n.d.). *NIMH Suicide Statistics*.
<https://www.nimh.nih.gov/health/statistics/suicide>

Emergency Task Force on Black Youth Suicide & Mental Health spearheaded by the Congressional Black Caucus cites an uptick in suicide rates among Black youth over the past decade.⁴

- [Scientific Soundness] Mortality data are collected from all death certificates filed in the 50 states and the District of Columbia.⁵
- [Feasibility] Data are easily downloadable and accessible through CDC WONDER and are updated annually.

- **Limitations:**

- [Equity] Fatal suicides of nonresidents (nonresident aliens, nationals living abroad, residents of Puerto Rico and other territories of the U.S.) are not reported in this measure.
- [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. Suicide rates may be undercounted if a coroner lists a more proximate cause as “cause of death” instead of suicide itself.
- [Scientific Soundness] Data representing fewer than 10 deaths are suppressed, and county-level deaths fewer than 20 people are marked as “unreliable.”⁶
- [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.
- [Relevance and Usability] Measuring suicide mortality deaths does not reflect the prevalence of non-lethal suicide attempts.

Calculation:

Overall Population:

$$\text{Suicide mortality}_{\text{Overall}} = \frac{\text{total number of deaths attributed to suicide}}{\text{total number of individuals}} \times 100,000 \text{ people}$$

⁴ The Congressional Black Caucus Emergency Taskforce on Black Youth Suicide and Mental Health. (2020). *Ring the Alarm: The Crisis of Black Youth Suicide in America*.

https://watsoncoleman.house.gov/uploadedfiles/full_taskforce_report.pdf

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

Black Populations:

$$\text{Suicide mortality}_{\text{Black}} = \frac{\text{number of deaths attributed to suicide among Black populations}}{\text{total number of Black individuals}} \times 100,000 \text{ people}$$