COUNTY HEALTH PROFILES
METHODS APPENDIX

This document provides additional information about the methods, measures, and data sources used in our 2020 County Health Profiles for each of Tennessee's 95 counties.

NOTES ABOUT OUR METHODOLOGY

Rankings

- For "Quick Facts," a rank of 1 indicates highest value. For all other measures, a rank of 1 is best and 95 worst. For example, the county with the highest diabetes rate ranks 95th. Due to data availability, only 72 counties are ranked for overdose deaths and 87 counties for mental health providers.
- When counties have the same value, they share the same ranking, which affects subsequent rankings. For example, 100% of individuals in 20 counties live in a rural area. All 20 counties are ranked as 1, and the county with the next highest rural concentration (99.9%) is ranked 21.

Measure Selection Criteria

- In order to be included, all measures had to be available at the county level.
- For each driver of health, we selected measures that are supported by the literature and have been used in analyses to assess the health care system, access to care, social and economic environments, physical environments, and health outcomes.

Timeliness of Data

- While the most recent available county-level data are used for each metric, the year of the most recent data varies by each source.
- To provide context for the county-level data, the state- and national-level data shown represent the same year(s) as the county data. In some cases, the comparable state- and national-level data may not represent the most recent available data. For example, many of the economic measures use 5-year estimates that represent an average over 2014-2018. These are the most recent estimates available across all counties; however, 1-year estimates that represent 2019 are available at the state and national levels but are not shown here because they would not be comparable to the county-level data.

ABOUT EACH MEASURE

Quick Facts

2019 Population: total estimated population on July 1, 2019
>   *Data Source*: U.S. Census Bureau's Annual Estimates of the Resident Population (1)
>   *Years of Data*: 2019

Age <18: percent of total 2019 mid-year population estimate under the age of 18
>   *Data Source*: U.S. Census Bureau's Annual Estimates of the Resident Population (1)
>   *Years of Data*: 2019

Age 65+: percent of total 2019 mid-year population estimate ages 65 and older
>   *Data Source*: U.S. Census Bureau's Annual Estimates of the Resident Population (1)
>   *Years of Data*: 2019

Race/Ethnicity: percent of total 2019 mid-year population estimate represented by the three largest race/ethnicity groups in each county.
>   *Data Source*: U.S. Census Bureau's Annual Estimates of the Resident Population (1)
>   *Years of Data*: 2019

Percent Rural: percent of population living in a rural area
> *Data Source*: U.S. Census Bureau's 2010 Census (2)
> *Years of Data*: 2010
> *Notes*: Based on the Census Bureau's definition, rural includes all populations not within Urbanized Areas of 50,000 people or more or Urbanized Clusters of at least 2,500 people and less than 50,000 people. (3)

County Health Outcomes

Overall Health Ranking: overall health outcomes ranking
> *Data Source*: Robert Wood Johnson Foundation (RWJF) County Health Rankings (4)
> *Years of Data*: 2020

Fair/Poor Health: percent of adults who rate their health as "fair" or "poor" (age-adjusted rate)
> *Data Source*: U.S. Center for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) via the 2020 RWJF County Health Rankings (4)
> *Years of Data*: 2017

Adult Diabetes: percent of adults ages 20+ who have ever been diagnosed with diabetes (age-adjusted rate)
> *Data Sources*: CDC's U.S. Diabetes Surveillance System (5)
> *Years of Data*: 2017
> *Notes*: The state rate is the median value of all 95 counties in Tennessee. The national rate is the median value across all U.S. counties.

Poor Mental Health Days: average number of days in the past 30 days adults reported "not good" mental health (age-adjusted)
> *Data Source*: CDC's BRFSS via the RWJF's 2020 County Health Rankings (4)
> *Years of Data*: 2017

Obese Adults: percent of adults ages 20+ that report a body mass index (BMI) of 30 or more (age-adjusted rate)
> *Data Sources*: CDC's U.S. Diabetes Surveillance System (5)
> *Years of Data*: 2017
> *Notes*: The state rate is the median value of all 95 counties in Tennessee. The national rate is the median value across all U.S. counties.

Overweight/Obese Students: Percent of public school students that are overweight or obese
> *Data Source*: Tennessee Coordinated School Health Program via the Kids Count Data Center (6)
> *Years of Data*: 2018
> *Note*: Comparable national rates are not available for the age-range represented by the county- and state-level data used here.

Low Birth Weight Babies: percent of live births in which the baby weighed less than 2,500 grams (or 5 pounds, 8 ounces)
> *Data Source*: Tennessee Department of Health via the Kids Count Data Center (6)
> *Years of Data*: 2018

The Drivers of Health

Research shows there are 4 broad factors (other than genetics) that influence our health. (7) (8) (9)

- The Social and Economic Environment
- Health Behavior
- Clinical Care
- The Physical Environment

We call these influencing factors the drivers of health. While the percentages may vary from study to study, research shows that some drivers have more influence on health than others. (8) Another term for the drivers of health is the social determinants of health.

Social & Economic Environment

Poverty Rate: percent of the population living in households with incomes below the poverty level
    Data Source: U.S. Census Bureau's American Community Survey (10)
    Years of Data: 2014-2018 5-year estimates

Educational Attainment (Associates Degree or More): percent of population ages 25+ with at least an associate's degree
    Data Source: U.S. Census Bureau's American Community Survey (10)
    Years of Data: 2014-2018 5-year estimates

Unemployment Rate: percent of population that does not have a job, are available for work, and have actively looked for a work in the prior 4 weeks (annual rate)
    Data Source: U.S. Bureau of Labor Statistics' Local Area Unemployment (11)
    Years of Data: 2019

Median Household Income: median income of all households
    Data Source: U.S. Census Bureau's American Community Survey (10)
    Years of Data: 2014-2018 5-year estimates

Crime Rate: number of crimes committed per 1,000 population
    Data Source: Tennessee Bureau of Investigation's TIBRS Online Reports System (12)
    Years of Data: 2019
    Note: National rates are not available for 2019.

Health Behaviors

Drug Overdose Deaths: total drug overdose deaths per 100,000 population
    Data Source: CDC WONDER Database (13)
    Years of Data: 2014-2018 5-year average

Adult Smokers: percent of adults who currently smoke
    Data Sources: CDC's BRFSS via RWJF's 2020 County Health Rankings (4).
    Years of Data: 2017

Physically Inactive Adults: percent of adults age 20+ reporting no leisure-time physical activity (age-adjusted rate)
    Data Sources: CDC's U.S. Diabetes Surveillance System (5)
    Years of Data: 2017
    Notes: The state rate is the median value of all 95 counties in Tennessee. The national rate is the median value across all U.S. counties.

Excessive Drinking: percent of adults reporting binge or heavy drinking
> *Data Source*: CDC'S BRFSS via RWJF's 2020 County Health Rankings (4)
> *Years of Data*: 2017
> *Notes*: Binge drinking is defined as >4 drinks for women or >5 drinks for men on a single occasion in the past 30 days. Heavy drinking is defined as an average of >1 drink for women or >2 drinks for men per day.

Clinical Care

Uninsured Rate, Age <65: percent of population under 65 without health insurance
> *Data Source*: U.S. Census Bureau's Small Area Health Insurance Estimates (15)
> *Years of Data*: 2018
> *Notes*: The U.S. Census Bureau combines American Community Survey, administrative records data, and 2010 Census data to produce single-year, county-level uninsured rates.

Pregnant Women Receiving Adequate Prenatal Care: percent of live births in a given calendar year where the mother received adequate prenatal care
> *Data Source*: Tennessee Department of Health via the Kids Count Data Center (6)
> *Years of Data*: 2018
> *Note*: The adequacy of care is based on the Kessner index, which was developed by the Institute of Medicine in 1973 to assess prenatal care. Comparable national data are unavailable for this measure.

Mental Health Providers: number of mental health providers per 100,000 population
> *Data Source*: U.S. Centers for Medicare and Medicaid Services (CMS) via RWJF's 2020 County Health Rankings (4)
> *Years of Data*: 2019
> *Notes*: Mental health providers include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers who treat alcohol and other drug abuse, and advanced practice nurses specializing in mental health care. The reported data were converted from the underlying data, which provided the ratio of the county population to mental health providers

Physical Environment

Air Quality: average annual ambient concentration of particulate matter measured in micrograms per cubic meter
> *Data Source*: CDC's National Environmental Public Health Tracking Network (16)
> *Years of Data*: 2014
> *Notes*: The Tennessee data represent the 95-county average. The national number represents the average across all U.S. counties. For context, the national air quality standard recommends a concentration of 12.0 micrograms per cubic meter or less. Tennessee does not have air quality monitors in all 95 counties. As a result, the data reported for 79 counties are CDC's modeled estimates.

Percent with Severe Housing Problems: percent of occupied housing units with 1 or more of the following severe housing problems: is severely cost-burdened (i.e. spend 50% or more of monthly income on housing costs), housing lacks complete kitchen, housing lacks complete plumbing, and/or is severely overcrowded (i.e. more than 1.5 persons per room)
> *Data Source*: U.S. Housing and Urban Development's (HUD) Comprehensive Housing Affordability Strategy data (17)
> *Years of Data*: 2013-2017 5-year estimates

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References

1. **U.S. Census Bureau, Population Division.** Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2019. June 2020. Accessed on September 29, 2020 from https://www.census.gov/data/tables/time-series/demo/popest/2010s-counties-detail.html.
2. **U.S. Census Bureau.** 2010 Census. [Online] Accessed on June 15, 2018 from https://www.census.gov/geo/reference/ua/urban-rural-2010.html.
3. –. 2010 Census Urban Area FAQs. February 9, 2015. Accessed on June 15, 2018. https://www.census.gov/geo/reference/ua/uafaq.html.
4. **University of Wisconsin Population Health Insitute and Robert Wood Johnson Foundation.** 2020 County Health Rankings: Tennessee. March 2020. Accessed on September 29, 2020 from https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation.
5. **U.S. Center for Disease Control and Prevention (CDC).** U.S. Diabetes Surveillance System. Accessed on September 29, 2020 from https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html.
6. **The Annie E. Casey Foundation.** Kids Count Data Center. 2020. Accessed on September 29, 2020 from https://datacenter.kidscount.org/data#TN/5/0/char/0.
7. **U.S. Department of Health and Human Services (HHS).** Recommendations for the Framework and Format of Healthy People 2020. *The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020.* October 28, 2008. https://www.healthypeople.gov/sites/default/files/PhaseI_0.pdf.
8. **McGovern, Laura, Miller, George and Hughes-Cromwick, Paul.** Health Policy Brief: The Relative Contributions of Multiple Determinants to Health Outcomes. *Health Affairs.* August 21, 2014. https://www.healthaffairs.org/do/10.1377/hpb20140821.404487/full/.
9. **Woolf, Steven H., et al.** The Health of the States: Summary Report. *Center on Society and Health at Virginia Commonwealth University and Urban Institute.* October 2016. http://www.urban.org/sites/default/files/publication/85211/health-of-the-states_1.pdf.
10. **U.S. Census Bureau.** American Community Survey 5-Year Estimates. [Online] December 2019. Accessed on September 29, 2020 from http://data.census.gov.
11. **U.S. Bureau of Labor Statistics (BLS).** Labor Force Data by County, 2019 Annual Averages. *Local Area Unemployment Statistics.* Accessed on September 29, 2020 from https://www.bls.gov/lau/#tables.
12. **Tennessee Bureau of Investigation (TBI).** TIBRS Online Reports System. 2020. Accessed on September 29, 2020 from https://crimeinsight.tbi.tn.gov/.
13. **U.S. Centers for Disease Control and Prevention (CDC), National Center for Health Statistics.** Underlying Cause of Death 1999-2018. *WONDER Online Database.* December 2019. Accessed on September 29, 2020 from http://wonder.cdc.gov/ucd-icd10.html.
14. **U.S. Census Bureau.** Small Area Health Insurance Estimates. 2020. Accessed on September 29, 2020 from https://www.census.gov/data-tools/demo/sahie/#/.
15. –. Small Area Health Insurance Estimates: About. February 18, 2020. https://www.census.gov/programs-surveys/sahie/about.html.
16. **U.S. Centers for Disease Control and Prevention (CDC).** National Environmental Public Health Tracking Network. Accessed on September 29, 2020 from https://ephtracking.cdc.gov/DataExplorer/#/.
17. **U.S. Department of Housing and Urban Development (HUD).** Comprehensive Housing Affordability Strategy Data. *Office of Poliyc Development and Research .* Accessed on September 29, 2020 from https://www.huduser.gov/portal/datasets/cp.html.