HEALTH

IN RURAL MISSOURI

Biennial Report

2024-2025

MISSOURI DEPARTMENT OF
HEALTH &
SENIOR SERVICES

Table of Contents

Executive Summary 2
Introduction 3
Defining Rural Health 4
The People of Missouri 5
Social Drivers of Health 10
The Health Status of Rural Missourians 19
Maternal, Infant and Child Health 40
Health Care in Rural Missouri 44
Office of Rural Health and Primary Care ... 49
Relevant Information and Initiatives 56
Recommendations 58
References 59

Office of Rural Health and Primary Care
Jack Wenkel, Manager, State Office of Rural Health
Deetrilynn Galbreath, Manager, Office of Primary Care
Aleesha Jones, Chief, Office of Rural Health and Primary Care

Bureau of Health Care Analysis and Data Dissemination
Andrew Hunter, Chief
Chelsea Fife, Research Manager
Kadarenna Matthews, Senior Research Analyst
Megan Troesser, Research Analyst

Division of Community and Public Health
Patricia Simmons, Assistant Deputy Division Director

Special Acknowledgments
Ashlee Anderson, Fatma Bayati, Anthony Belenchia, LeighAnna Bennett, Michael Bonnett, Ryuki Deyton, Christen Easter, Logan Galloway, Sam Heidemann, Erin Henry, JC Jackson, Sunil Patel, Jesus Vela and Diana Winder.

Leading Causes of Death

The National Center for Health Statistics (NCHS) has a well-established approach to ranking different causes of death. Instead of using the age-adjusted death rate, the ranking is determined based on the actual number of deaths recorded. In the table provided, the causes of death are presented in a sequence that reflects the primary causes for individuals statewide.

Examining the data on mortality frequencies in Missouri's rural and urban areas yielded valuable observations regarding the factors contributing to the deaths of residents in these regions. The data showed that rural areas had higher death rates across almost all 10 causes compared to urban areas. The lone exception was Alzheimer's disease. Heart disease and cancer continue as the top two leading causes of death, just as they have for the last decade. Slightly less than half (42.2%) of all deaths in rural areas can be attributed to one of these two causes. This denotes a decrease compared to the 2014-2018 period, when cancer and heart disease accounted for 47.0 percent of rural deaths.

Leading Causes of Death Summary Table
Missouri, 2019-2023

Rank	Cause	Missouri Frequency	Missouri Rate	Rural Frequency	Rural Rate	Urban Frequency	Urban Rate
Rank 1	Heart Disease	77,849	195.5	31,482	218.5	46,366	182.6
Rank 2	Cancer	65,081	160.3	25,959	176.1	39,122	151.5
Rank 3	Accidents/ Unintentional Injuries	22,643	70.0	7,707	71.2	14,935	69.4
Rank 4	COVID 19	20,313	51.2	8,574	59.5	11,738	46.5
Rank 5	Chronic Lower Respiratory Diseases	18,794	45.9	9,121	60.5	9,673	37.5
Rank 6	Stroke (cerebrovascular diseases)	15,776	39.6	5,981	41.3	9,795	38.8
Rank 7	Alzheimer's Disease	13,308	33.6	4,756	32.4	8,552	34.2
Rank 8	Diabetes	9,109	23.0	4,055	28.3	5,054	20.0
Rank 9	Kidney Disease (nephritis, nephrotic syndrome and nephrosis)	8,097	20.4	3,126	21.6	4,971	19.6
Rank 10	Suicide	5,774	18.4	2,101	20.3	3,673	17.4

Source: Missouri Vital Statistics Death File
Age-adjusted rates per 100,000 population

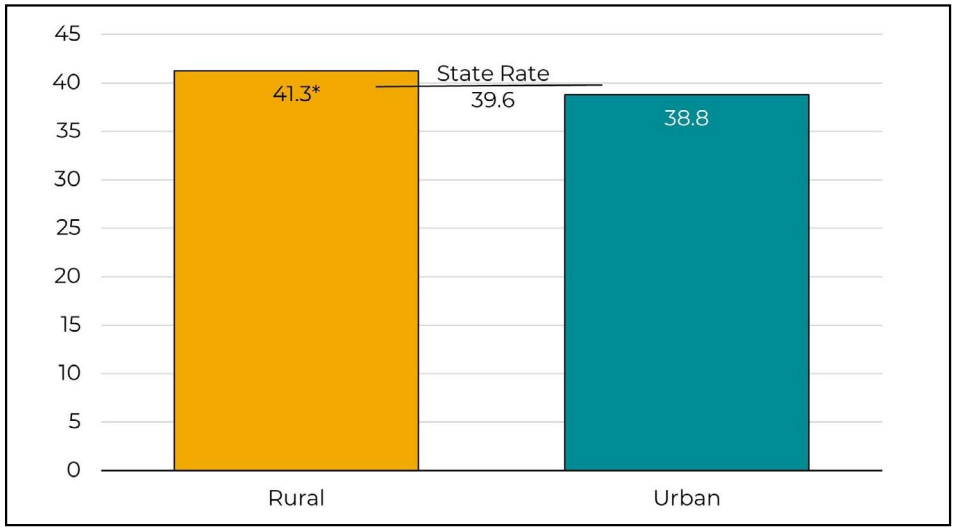
When comparing the leading causes of death for 2014-2018 and 2019-2023 periods, the addition of COVID-19 (ranked 4th in 2019-2023) caused several disease categories to fall in the rankings.

The following pages describe rural trends for the top six leading causes of death. A section on suicide is also included due to its increase in recent years.

Stroke

Stroke was the underlying cause of death for 5,981 rural Missourians at a rate of 41.3 deaths per 100,000 residents over 2019-2023. At this rate, stroke death is the sixth leading cause of death in rural Missouri. The death rate for rural counties was statistically significantly higher (41.3) than the rate in urban counties (38.8).

Stroke Death Rates
Missouri, 2019-2023



Source: Missouri Vital Statistics Death File
Age-adjusted rates per 100,000 population
*Indicates a rate is statistically significantly higher using 95% confidence intervals

Stroke Death Rates
Missouri, 2019-2023

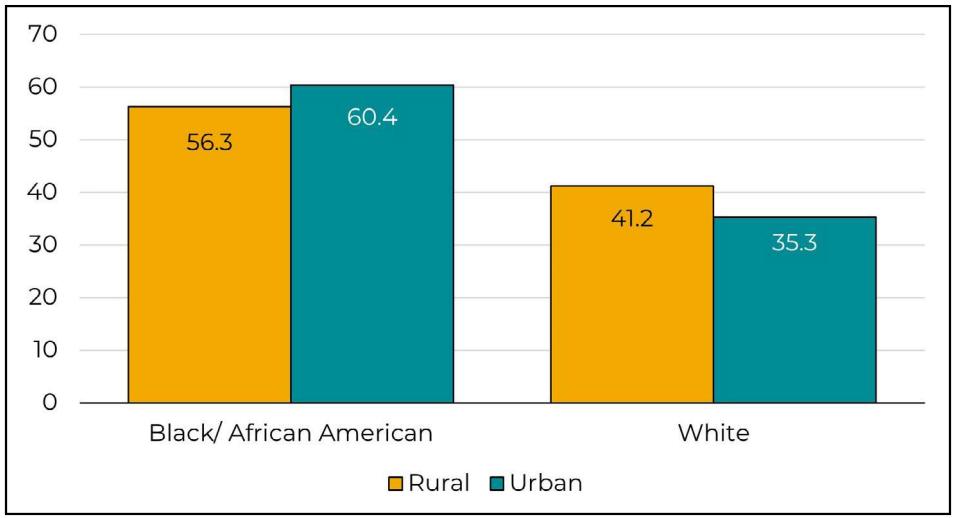
Rank	Rural	Urban
Frequency	5,981	9,765
Rate	41.3	38.8
Percent Change (2019-2023)	+4.9%	+4.3%

Source: Missouri Vital Statistics Death File
Age-adjusted rates per 100,000 population

Other county trends include:

- Three of the four highest county rates for stroke deaths are rural counties found in the Bootheel region: New Madrid (69.9), Dunklin (67.6), and Mississippi (67.6). The top 31 counties in stroke death rates are all rural counties, with St. Louis City (46.8) having the highest urban county rate.
- Four of the lowest seven county rates for stroke deaths were found in northwestern Missouri: Nodaway (26.7), Worth (26.8), Andrew (27.2) and DeKalb (23.9).

Stroke Death Rates by Race
Missouri, 2019-2023



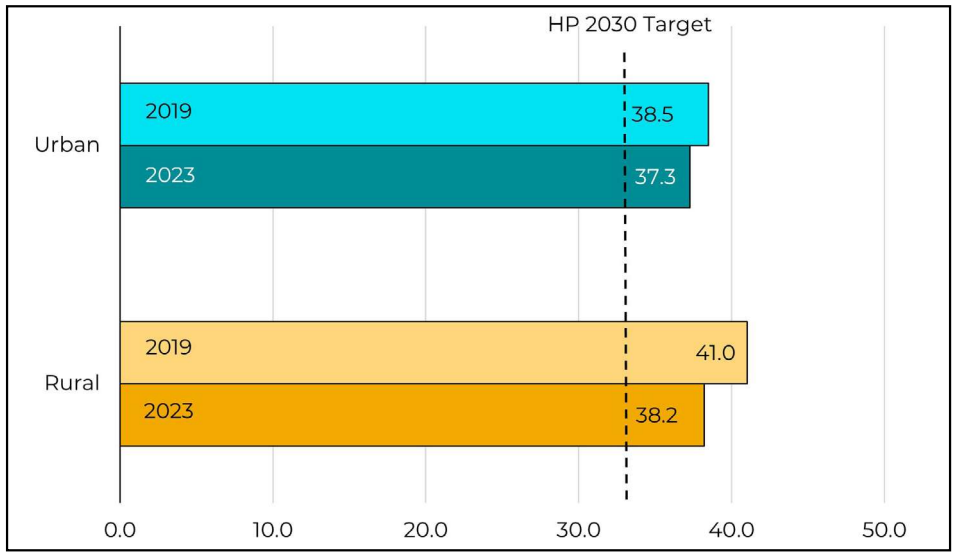
Source: Missouri Vital Statistics Death File
Age-adjusted rates per 100,000 population

In both rural and urban counties, Black/African American Missourians have a higher death rate from strokes than their white counterparts. While the rural disparity between white and Black/African American stroke death rates is only 36.6 percent, which is still significant, the urban disparity is 71.1 percent, nearly twice as large a gap.

Unlike other leading causes of death, the stroke death rate for Black/African American Missourians in urban areas is higher (60.4) than the death rate (56.3) for Black/African American Missourians living in rural areas.

The Healthy People 2030 goals set a target of a 10 percent reduction in stroke deaths, from the baseline rate of 37.1 in 2018, to 33.4.[xxvi] However, the most recent data for the United States shows the national rate has increased to 39.0. Over a five-year span from 2019 to 2023, the statewide rate for Missouri comes in right above the national rate, at 39.6. For 2023, both rural and urban rates are lower than they were in 2019, but neither is below the Healthy People 2030 baseline.

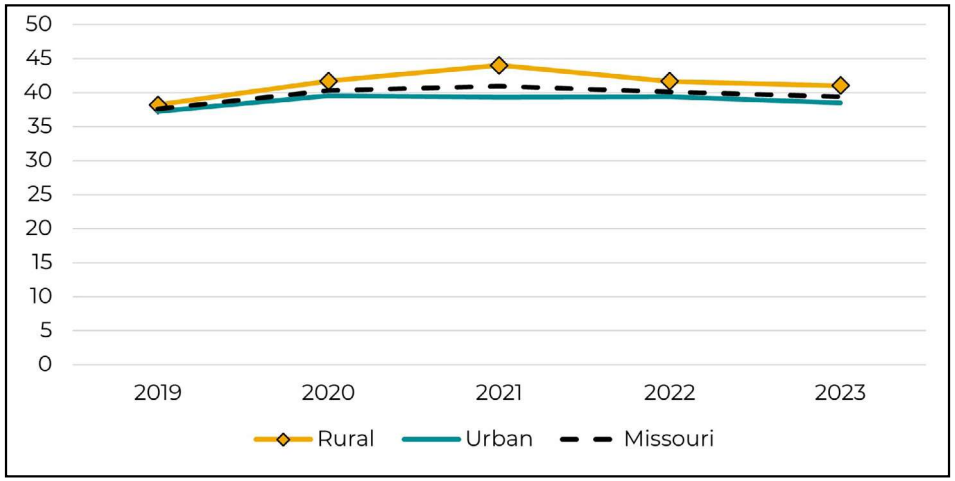
Stroke Death Rates
Missouri, 2019-2023



Source: Missouri Vital Statistics Death File
Age-adjusted rates per 100,000 population

The largest difference between urban and rural rates during this period occurred in 2021. In that year, rural counties' death rates were 12.0 percent higher than urban counties' death rates. By 2023, the gap had decreased to 6.5 percent, primarily due to steeper declines in the rural rate.

Stroke Death Rates by Year
Missouri, 2019-2023



Source: Missouri Vital Statistics Death File
Age-adjusted rates per 100,000 population