ISSUE 34 MARCH 2025

MOPHIMS NEWSLETTER

Missouri is among the worst in the nation for new lung cancer cases

LUNG CANCER IN MISSOURI

Lung cancer is responsible for more deaths than all other cancer types. In the last ten years, lung cancer has claimed the lives of more than 37,000 Missourians. According to the 2024 "State of Lung Cancer" report published by the American Lung Cancer Association, Missouri is among the worst in the nation for new lung cancer cases, ranking 44th out of 49 states reporting.[1]

SMOKING

In the United States, cigarette smoking is linked to about 80% to 90% of lung cancer deaths, making it the number one risk factor for lung cancer.[2] The graphic on the right shows nearly 17% of adults in Missouri smoked cigarettes in 2022. People who smoke cigarettes are 15 to 30 times more likely to develop lung cancer or die from lung cancer than people who do not smoke.[2]

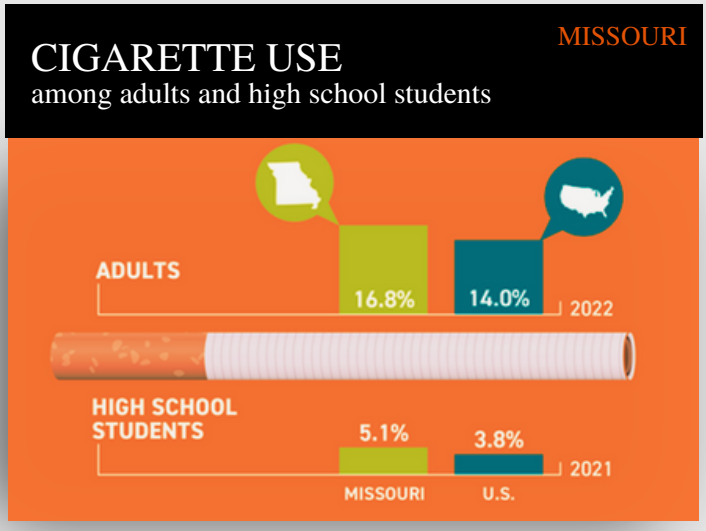


Image Source

RADON

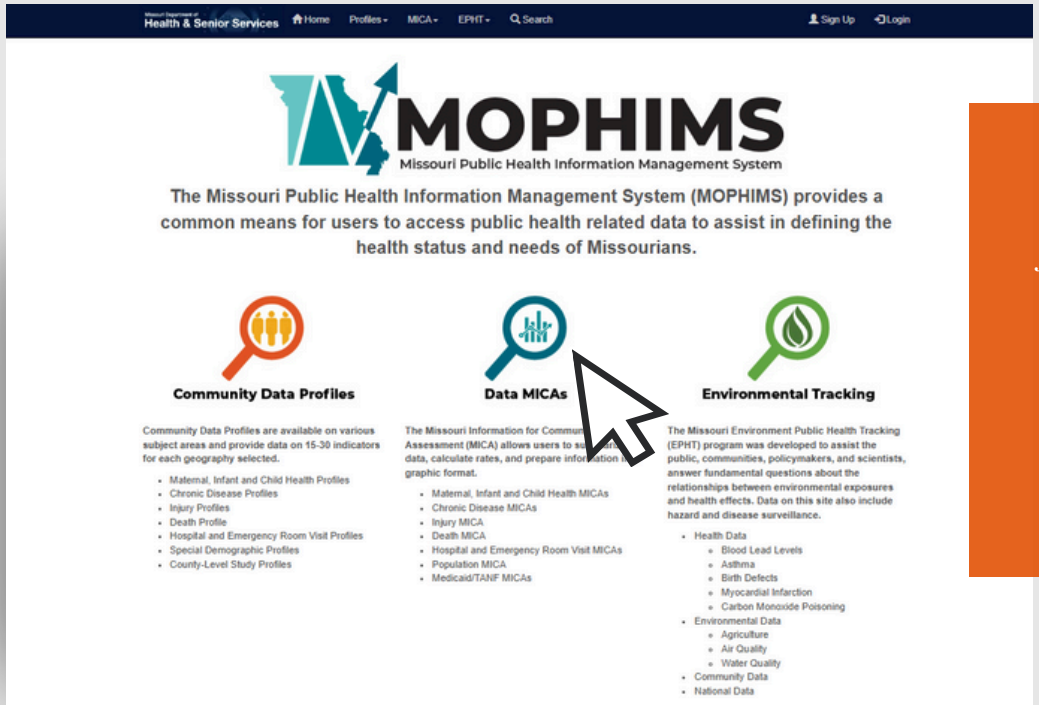
Radon is the second leading cause of lung cancer and the first leading cause among nonsmokers. Colorless, odorless, and naturally occurring, radon can seep through homes and buildings, leading to build up in the air. Living and working in structures with high radon levels over long periods of time can lead to lung cancer.

Radon is the number one leading cause of lung cancer for non-smokers

LUNG CANCER DATA ON MOPHIMS

The Missouri Public Health Information System, better known as MOPHIMS, provides access to various public health data in Missouri, including chronic disease and death data. Follow along to learn how you can build queries related to this topic using the Chronic Disease Death MICA.

ACCESS MOPHIMS HERE



The Missouri Information for Community Assessment (MICA) allows users to summarize data by building customizable tables, charts, and maps

Suppose you are interested in comparing Lung Cancer death rates in the **7 BRFSS regions** in 2021. Users can make the following **changes** on the Chronic Disease Death MICA.

Choose Your Data

Geography: BRFSS Region
All Selected (7)

Cause: De-select 'Select All Major Items'
Click the + next to Cancer, select Malignant neoplasm of trachea/bronchus lung

Build Your Results

Build a Table

Main Column: Statistics

Confidence Intervals: 95% Confidence Intervals

Submit Query

Statistics:	Count	Rate	Lower 95% Conf Limit	Upper 95% Conf Limit
BRFSS Region				
Central	406	42.82	38.76	47.19
Kansas City Metro	592	37.03	34.05	40.01
Northeast	178	49.33	42.35	57.13
Northwest	162	52.81	44.99	61.60
Southeast	440	54.53	49.55	59.87
Southwest	611	44.52	40.99	48.05
St. Louis Metro	1,071	37.29	35.06	39.53
Total for selection	3,460	41.82	40.42	43.21
Missouri	3,460	41.82	40.42	43.21

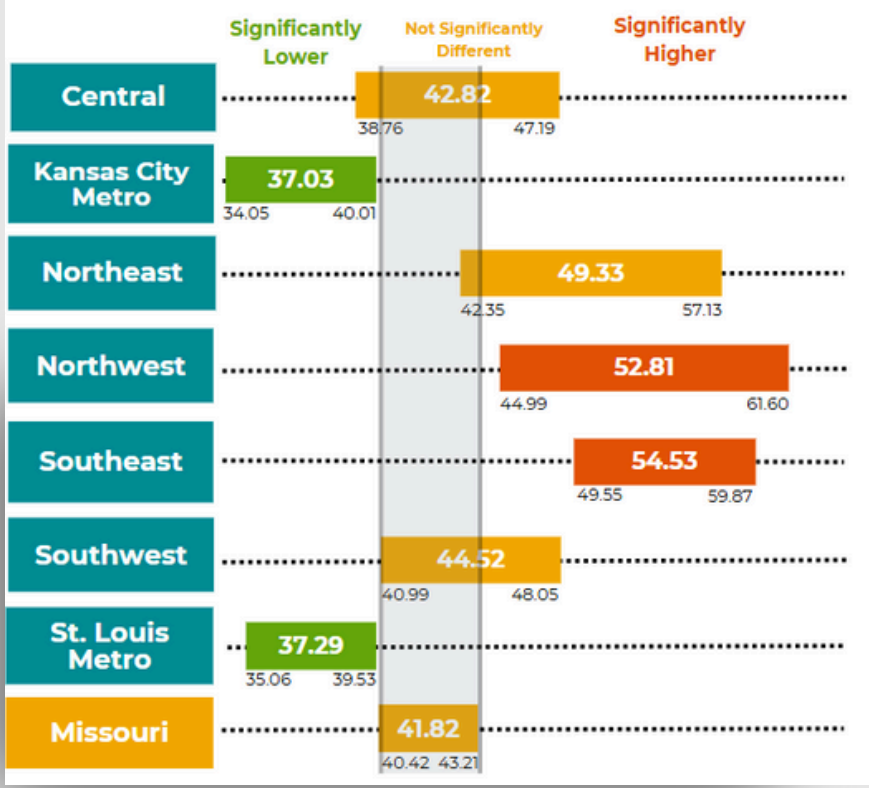
The table to the left shows the Southeast Region had the highest lung cancer death rate of 54.53 per 100,000 population, followed by the Northwest (52.81), Northeast (49.33), Southwest (44.52), Central (42.82), St. Louis Metro (37.29), and Kansas City Metro (37.03) Region. During this year, Missouri had 3,460 lung cancer deaths, with a rate of 41.82 per 100,000 population.

How do we determine if these rates are significant? Let's see if the regions' rates are statistically significant by comparing them to the state's lung cancer death rate.

Rate: Death rates are annualized per 100,000 residents and are age adjusted to the U.S. 2000 Standard Population It is important to note these rates CANNOT be read as percentages.

The confidence intervals to the right determine if each region's rate is statistically significantly different. When comparing these to the state, if the confidence intervals **OVERLAP** there is no significant difference. If the confidence intervals **DO NOT OVERLAP** there is a significant difference.

The **Kansas City** and **St. Louis Metro** Regions had rates that were statistically significantly lower than the state. The **Northwest** and **Southeast** Regions had lung cancer death rates that were statistically significantly higher than the state in 2021.



Now that we have found 2 of the 7 regions had lung cancer rates that were significantly higher than the state rate, users can see how the 2 regions compared over time by creating a trend line. To create a trend line, make the following changes to the query:

Choose Your Data

Year: Single Year(s)
Select 2011- 2021

Geography: BRFSS Region
De-select 'Select All'
Select Northwest and Southeast

Build Your Results

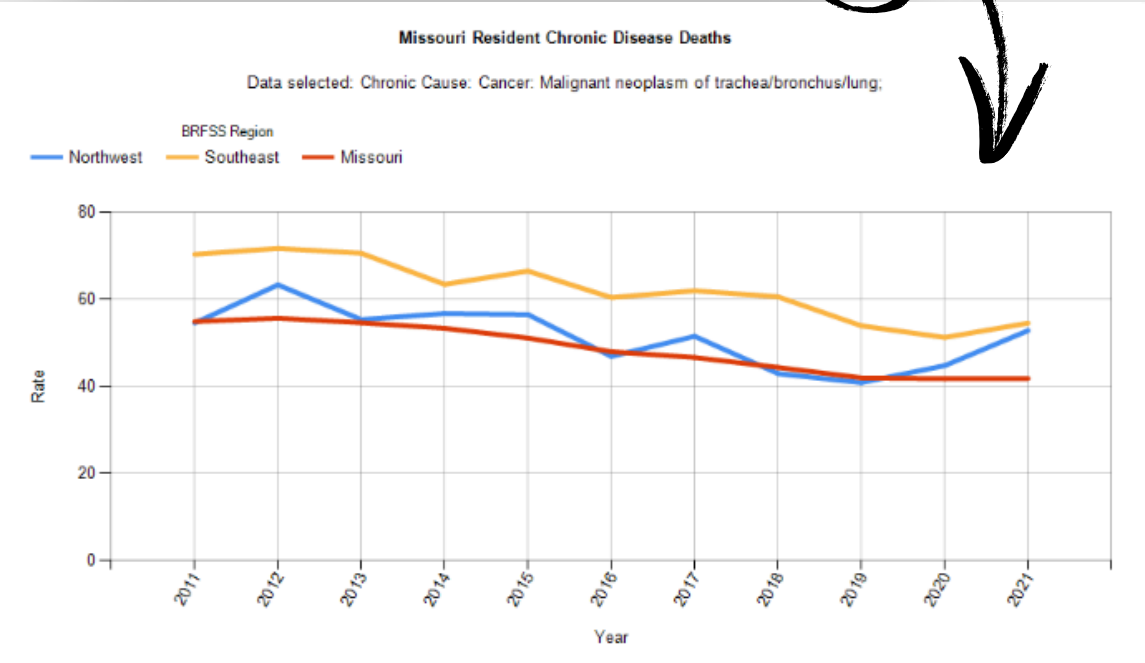
Create a Chart

Type of Chart: Trend Line

Variable Axis: Year

Value Axis: Geography

Create Chart

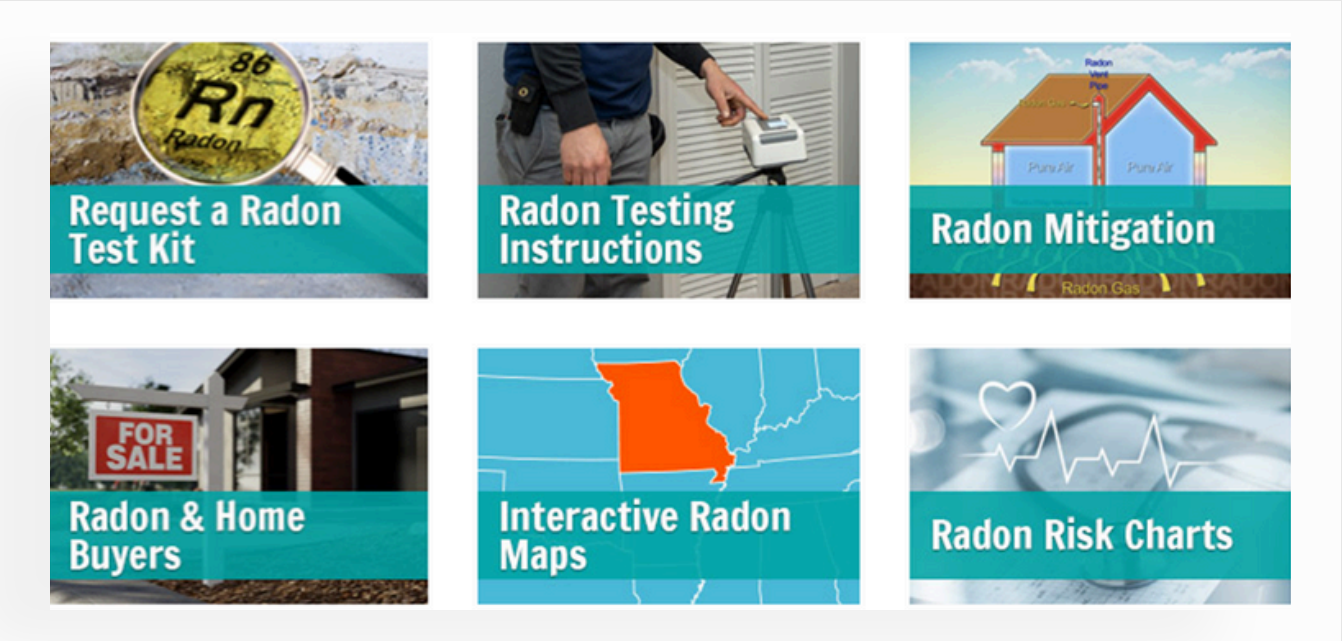


Further trend analysis shows lung cancer death rates in the **Southeast** have trended downwards, but this region continues to have the highest rates. The **Northwest** Region shows an upward trend in the two most recent years and was well above the Missouri state rate, nearly matching the **Southeast** lung cancer death rate in 2021.

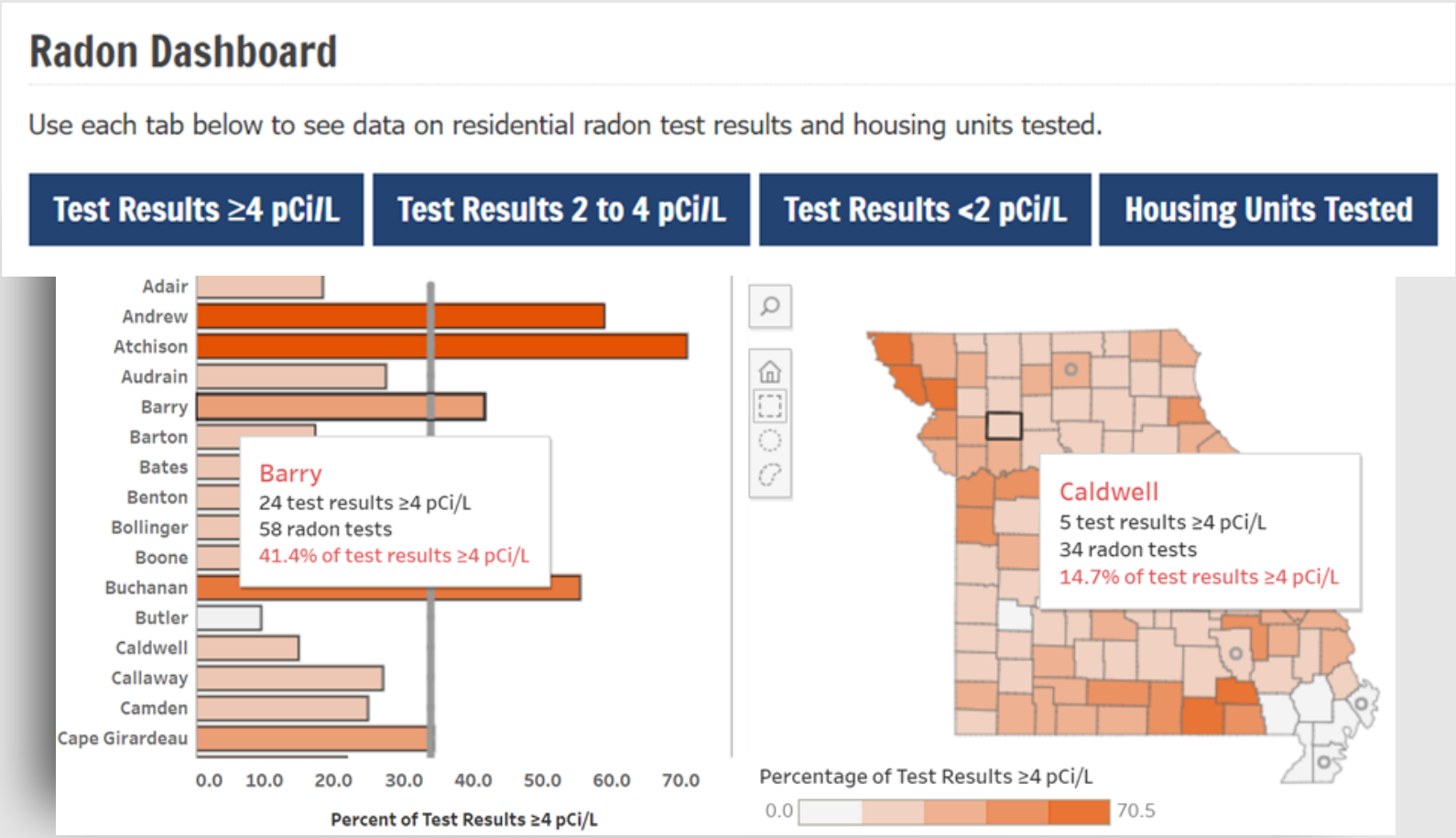
EPHT RADON RESOURCES

The Environmental Public Health Tracking program published a new dashboard that explores statewide radon test results. The dashboard can be found here → **DASHBOARD**

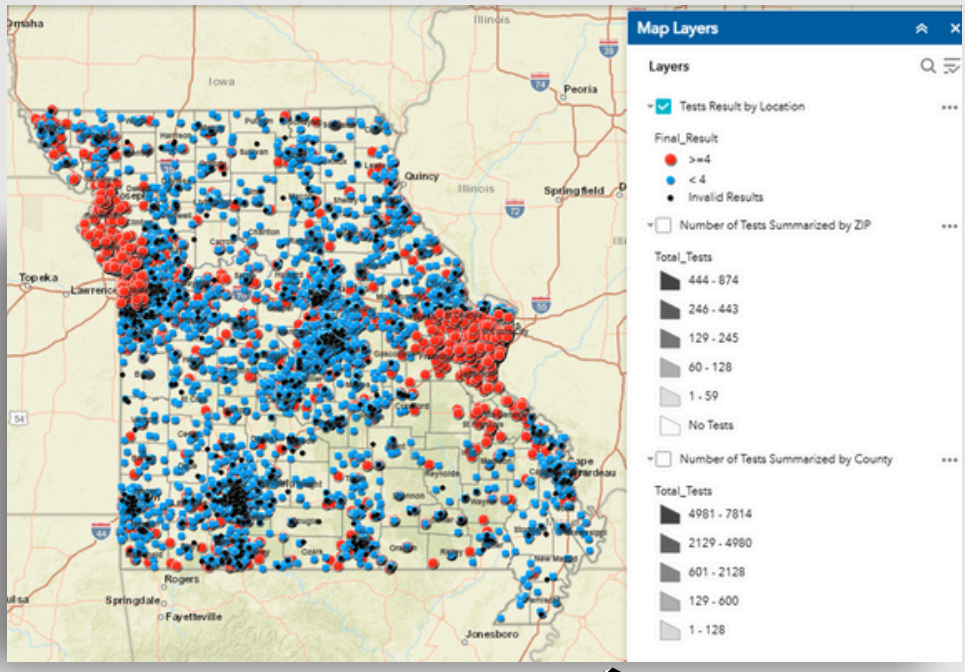
Citizens can request a FREE radon test kit link in the top right corner. DHSS offers short-term radon test kits to Missourians at no cost while supplies last. These test kits are easy to use and require the resident to place the test in an appropriate area of their home for a few days before sealing the sample up along with its paperwork and mailing it to a lab for analysis. Kits are currently out of stock but are expected to return by early summer. In the meantime, users can browse information on testing instructions, mitigation strategies, and more resources for homeowners on the DHSS Radon Page.



Also on the EPHT radon dashboard page, users can explore statewide radon test results that are categorized by recommended actions. These are shown in the navigation bar above. **Approximately one of every three homes tested for radon in Missouri has been found to have a radon concentration exceeding the Environmental Protection Agency's (EPA) action level of 4 (pCi/L).** The EPA recommends mitigation if radon concentration is at or above 4 pCi/L (picocuries per liter) and "consideration" of mitigation between 2 and 4 pCi/L. If radon concentration is below 2 pCi/L, no further action is needed.



After selecting a particular set of test results, users can view a map and bar chart breaking down results by county. Details about the radon tests are shown by hovering over or clicking a county of interest in the map or chart or by looking at the summary table below.
Below the radon dashboard, users can access a map of all the test results by clicking on the Missouri Radon Testing – Residential link. The map has 3 layers; individual results and summaries by county and zip code. Users can toggle all layers on and off.



The Environmental Public Health Tracking (EPHT) Program is happy to answer any questions about this dashboard.

MISSOURI DEPARTMENT OF HEALTH & SENIOR SERVICES
Environmental Public Health Tracking

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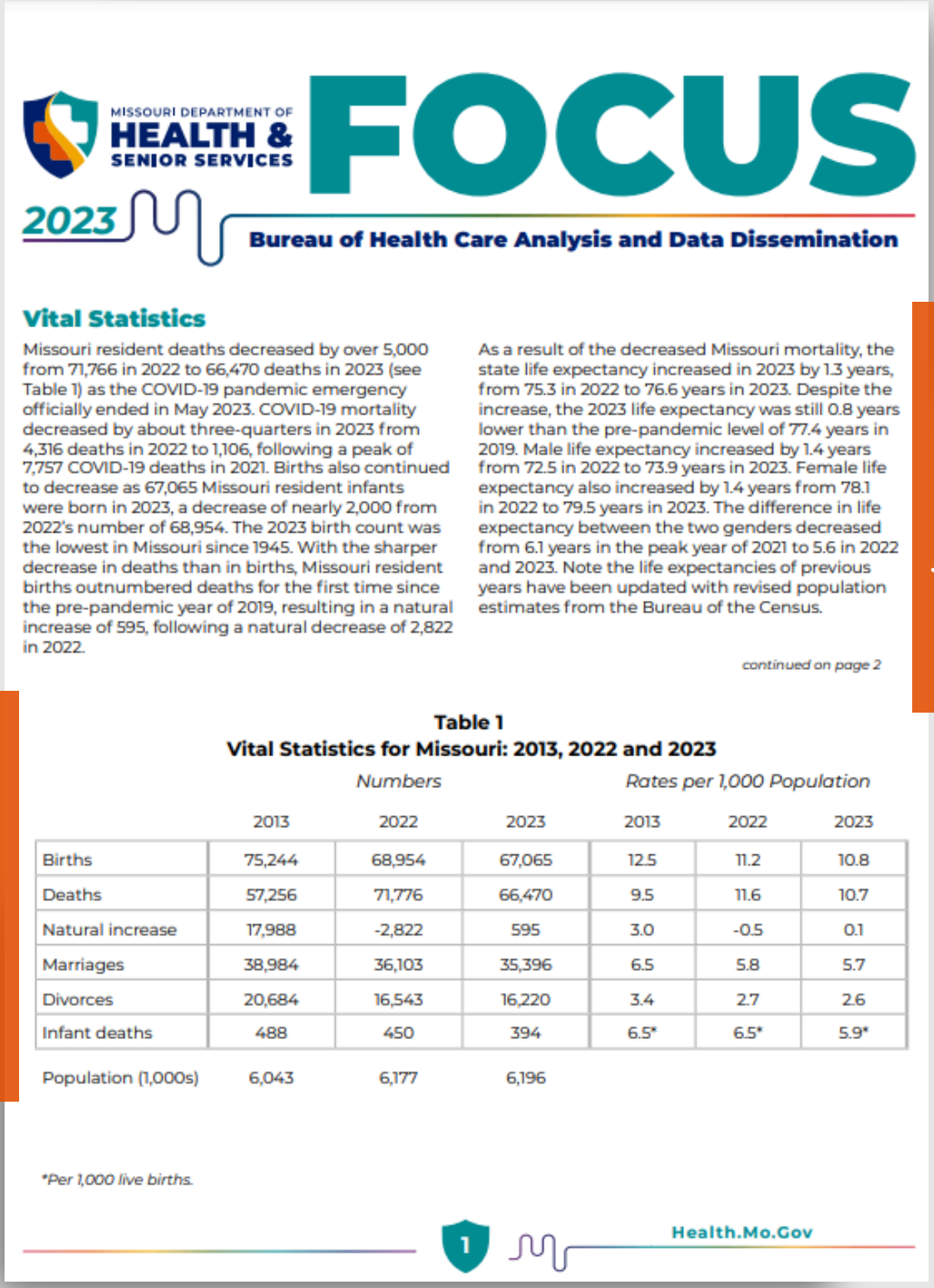
2023 VITAL STATISTICS FOCUS ARTICLE

The Bureau of Health Care Analysis and Data Dissemination has released the annual Missouri Vital Statistics Focus Article for 2023. Click to read more.



MISSOURI DEPARTMENT OF HEALTH & SENIOR SERVICES

FOCUS

2023

Bureau of Health Care Analysis and Data Dissemination

Vital Statistics

Missouri resident deaths decreased by over 5,000 from 71,766 in 2022 to 66,470 deaths in 2023 (see Table 1) as the COVID-19 pandemic emergency officially ended in May 2023. COVID-19 mortality decreased by about three-quarters in 2023 from 4,316 deaths in 2022 to 1,106, following a peak of 7,757 COVID-19 deaths in 2021. Births also continued to decrease as 67,065 Missouri resident infants were born in 2023, a decrease of nearly 2,000 from 2022's number of 68,954. The 2023 birth count was the lowest in Missouri since 1945. With the sharper decrease in deaths than in births, Missouri resident births outnumbered deaths for the first time since the pre-pandemic year of 2019, resulting in a natural increase of 595, following a natural decrease of 2,822 in 2022.

As a result of the decreased Missouri mortality, the state life expectancy increased in 2023 by 1.3 years, from 75.3 in 2022 to 76.6 years in 2023. Despite the increase, the 2023 life expectancy was still 0.8 years lower than the pre-pandemic level of 77.4 years in 2019. Male life expectancy increased by 1.4 years from 72.5 in 2022 to 73.9 years in 2023. Female life expectancy also increased by 1.4 years from 78.1 in 2022 to 79.5 years in 2023. The difference in life expectancy between the two genders decreased from 6.1 years in the peak year of 2021 to 5.6 in 2022 and 2023. Note the life expectancies of previous years have been updated with revised population estimates from the Bureau of the Census.

continued on page 2

Table 1
Vital Statistics for Missouri: 2013, 2022 and 2023

	Numbers			Rates per 1,000 Population		
	2013	2022	2023	2013	2022	2023
Births	75,244	68,954	67,065	12.5	11.2	10.8
Deaths	57,256	71,776	66,470	9.5	11.6	10.7
Natural increase	17,988	-2,822	595	3.0	-0.5	0.1
Marriages	38,984	36,103	35,396	6.5	5.8	5.7
Divorces	20,684	16,543	16,220	3.4	2.7	2.6
Infant deaths	488	450	394	6.5*	6.5*	5.9*
Population (1,000s)	6,043	6,177	6,196			

*Per 1,000 live births.

1 Health.Mo.Gov

Deaths decreased by over 5,000 from 2022 to 2023

State life expectancy increased in 2023 by 1.3 years

AVAILABLE DATA

Maternal, Infant and Child Health MICAs

- Birth 2021
- Fertility and Pregnancy Rate 2021
- Pregnancy 2021
- WIC Child 2023
- WIC Infant 2023
- WIC Prenatal 2021
- WIC Postpartum 2021
- WIC Linked Prenatal-Postpartum 2021

Chronic Disease MICAs

- Cancer Incidence 2021
- Chronic Disease Death 2021
- Chronic Disease Emergency Room 2015
- Chronic Disease Inpatient Hospitalization 2015

Injury MICA

- Injury 2015

Death MICA

- Death 2021

Hospital and Emergency Room Visit MICAs

- Emergency Room 2015
- Inpatient Hospitalizations 2015
- Preventable Hospitalizations 2015
- Procedures 2015

Population MICA

- Population 2021

If you need more current data than what is available, please reach out and we will do our best to complete your request. Hospital-based datasets are not being updated online yet, but we do have provisional data through 2023 available upon request.

NEW **VISIT MOHEALTHDATA.ORG FOR BRFSS AND CLS DATA**

For an overview of the MOPHIMS system, Profiles, MICAs and information on how to become a registered user, you can watch the MOPHIMS Demo Webinar on the department website under 'Community Health Assessment Intervention Planning' located HERE

TELL US WHAT YOU THINK!

Give us feedback to help us improve

START

SOURCES

1 New Report Reveals Missouri Among Worst in Nation for Rate of New Lung Cancer Cases, American Lung Association, Published November 2024.

2 Lung Cancer Risk Factors. CDC. Updated February 2025.

3 Missouri. American Lung Cancer Association State of Lung Cancer. 2024.

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